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Lessons of the Financial Crisis

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PHILADELPHIA
AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE
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1908

9th set.

PREFATORY NOTE

On Monday evening, December 2d, the Academy devoted a special session to "The Lessons of the Financial Crisis." Those taking part in the discussion were as follows:

Mr. Frank A. Vanderlip, New York City
Vice-President National City Bank and former Assistant Secretary of the Treasury

Hon. William Barret Ridgely, Washington, D. C.
Comptroller of the Currency

Hon. Charles H. Treat, Washington, D. C.
Treasurer of the United States

Mr. Jacob H. Schiff, New York City
Senior Member of the firm of Kuhn, Loeb & Co.

Mr. Isaac N. Seligman, New York City
Member of the firm of J. & W. Seligman & Co.

Mr. William A. Nash, New York City
President Corn Exchange State Bank

Mr. Andrew J. Frame, Waukesha, Wis.
President of the Waukesha National Bank

The addresses delivered at this session attracted widespread attention throughout the United States, as well as abroad. Full cablegraphic accounts were sent to the London Times and to a number of the continental newspapers. The timeliness of the topic, as well as the important material presented in the addresses, made it desirable to make this series of papers available to a larger public. To supplement the papers presented at the session the Publication Board has been able to secure the co-operation of financiers from different sections of the country. Thus the views of the Far West and of the South have been presented as well as those of the East.

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FRANCE: L. Larose, Rue Soufflot 22, Paris.

GERMANY: Mayer & Müller, 2 Prince Louis Ferdinandstrasse, Berlin, N. W.

ITALY: Direcione del Giornale degli Economisti, via Monte Savello, Palazzo Orsini, Rome.

SPAIN: Libreria Nacional y Extranjera de E. Dossat, antes, E. Capdeville, 9 Plaza de Santa Ana, Madrid.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY.

WASHINGTON, *November 29, 1907.*

MY DEAR PROFESSOR ROWE:

It is a matter of keen regret that I am not able to be with you at your meeting, but the pressure of my duties here just at this time is so great that I am sure every one will understand why I am unable to attend. I observe from the list of speakers that the Treasury Department will be ably represented in the persons of the Treasurer of the United States and the Comptroller of the Currency. These and the other speakers of the evening, who are men of deservedly high prominence in the banking and business world, will surely make the meeting a notably interesting and instructive one for those who are so fortunate as to be present.

The financial situation is, of course, engaging the earnest attention of our people. The attitude of the Treasury Department is and has been that of extending all possible relief and of using every means within its power to help all sections. Its readiness to go to the utmost in this direction has, I think, been amply evidenced—if further evidence were needed—by the events of the past few days. The measures that have been taken from time to time by the Department, and by bankers and business men acting in co-operation, have greatly alleviated the severity of the stringency, and, with the continued support of our patriotic citizens everywhere, I look for the immediate future to bring even more gratifying results.

The influence of such organizations as yours, through meetings like the one you are holding Monday evening, can be made very helpful in the direction of enlightening public opinion, in restoring confidence and in maintaining our prosperity.

With congratulations and best wishes for your members and their guests, believe me,

Very sincerely yours,

GEORGE B. CORTELYOU.

Prof. L. S. ROWE, President,
American Academy of Political and Social Science, West Philadelphia, Pa.

THE PANIC AS A WORLD PHENOMENON

By Frank A. Vanderlip,
Vice-President National City Bank, New York.

It might very properly be urged that the present is too early a date for us to draw wise conclusions from the lessons of the recent financial crisis. Indeed, one can hardly speak of it, as I did just now, as the recent crisis. It is the present crisis. If we are not well in the midst of it, we at least continue to be surrounded with many unpleasant features that have formed a part of that crisis. We are still in a situation where a great majority of the banks of the country have practically suspended cash payments.

Domestic exchanges are still seriously disorganized. After the most heroic measures for relief, taken by the Treasury and by banks generally, we continue to be surrounded by abnormal conditions, and the day is somewhere in the future when we can look back with anything like academic interest and comment with intelligence on the true lessons which have been taught by this extraordinary financial event.

Although it may be too early to speak with certainty about these lessons, there is good excuse to give consideration to the phenomena of the crisis, even at as early a date as the present. Sufficient excuse may be found in the profound necessity which exists for an understanding of the causes and a comprehension of the principles which must underlie proper remedies for such a financial panic. There has never been a time in our political history, I believe, when there was more necessity for a broad educational movement in relation to financial affairs, than at the present time. The necessity for education so that the public will comprehend the underlying principles governing sound banking and a proper currency is as great to-day as was the necessity for education in regard to the standard of value ten years ago.

The causes of the remarkable financial disturbances which we have been experiencing are more or less obvious. Still, men are not agreed upon them nor upon the varying degree of importance that should be allotted to those causes that are obvious. Some

men will trace the roots of the trouble to the policies of the President of the United States. Some will trace them directly to the activities of the "gamblers" of Wall Street, as they choose to call that portion of the community. Now the truth lies at neither of these extremes nor indeed does it lie between them. It is much broader, deeper and more comprehensive than either of these suggestions.

If I were to attempt in just a word to outline the causes as I see them, I should say that we must run back for some of the roots to the terrific losses which the world's capital experienced as a result of the Boer War, costing as it did one billion of dollars, the Japanese-Russian War, which cost one and one-quarter billions, and the losses of the San Francisco disaster, which footed another half billion. Here we have figures of nearly three billions of dollars direct loss to the world's capital. That loss too, came at a moment when the world was just entering upon a most intense industrial activity, an activity which created what was, I presume the greatest demand for capital that the world has ever known.

The world has thus, in an unprecedented degree, been using of its liquid capital. We have seen railroads and other corporations inexorably pushed to build new lines, to add to their equipment and to extend plants. But although the corporations were forced to make these expenditures by the demands which broadening industry and growing commerce made imperative, they became at last, owing to the exhaustion of the world's investment fund, unable to sell securities to provide money for their forced expenditures. They were unable to sell bonds, even though the security that was offered was wholly above criticism. The investment capital of the world became well nigh exhausted. That phase of the situation was by no means confined to America. It was international in its origin and world-wide in its effect.

This financial crisis, however, has by no means been altogether a matter of money. It has, in large measure, been a matter of what was in men's minds. I would again go back a few years in search for the roots of our present difficulties and note that we have had a period of so-called "muck raking." A period in which there has been the most general criticism of leaders, both financial and political. Now, to tell the truth, we have had a good deal of honest reason for criticism; at the same time, it is unquestionably true

that much of the criticism has been unfounded. There has, however, been brought forward evidence enough to show that no small measure of criticism was merited.

The financial world approached the fall months of 1907 with a situation in which investment capital was practically exhausted and at a time when the confidence of the people in financial leaders had been severely shaken. It was not alone the confidence of the people in financial leaders that had been shaken, however. The confidence of the financial leaders, the confidence of investors and of men who control capital had been shaken in the people. The confidence of those men, in the wisdom of legislation, in the fairness of legislators, in the high-mindedness of courts and in the right spirit and justice of public opinion, has been seriously shaken. We approached these fall months then with a situation where confidence was lost on the part of the people in the financial leaders and was shaken on the part of those who directed large corporate affairs, in the stability of conditions such as only an honest and fair public opinion can insure.

We approached these months with a banking and currency situation in which any withdrawal of money from the banking centers, even such a withdrawal as comes with the ordinary legitimate demands for the crop movement, meant, because of a bad banking and currency system, a withdrawal of reserves from the banks. We approached these trying months with a currency system which had in it no expansive element. If more circulation were to be needed, there were only three places it could come from. It might come from abroad in the shape of gold imports, it might come from the treasury in the form of additional public deposits, or failing a sufficient supply from these two sources, it must come from the reserves of the banks.

We have been preaching about the necessity for an expansive currency for years. We have now had an illustration of the need of it, an illustration of the danger which we run to be without it, which is going to go farther to convince the people that we require legislation, than have all the meetings and all the addresses which have been made on this subject in a great many years.

Of course, if one were to trace more minutely the causes of the financial upheaval, he might find the direct, immediate cause was intimately related to trust company development. A great

number of trust companies have been organized in the last few years. Bank depositors have been very greedy to obtain high interest rates. The trust companies, with small reserve requirements, were in a position to pay higher interest rates than did the commercial banks. In some cases they paid rates that were too high, and in order to pay such rates they engaged their capital in a way which was not the most conservative. That made the situation such, taken in connection with the general shock to confidence which I have referred to, that when a breath was raised against the credit of trust companies, it found quick lodgment in the minds of the people and depositors, and made those suspicions promptly felt by large withdrawals of deposits and a considerable hoarding of cash. The hoarding, indeed, was not confined to the people altogether. It soon extended to the banks themselves, and has finally become one of the most important features of the situation. This hoarding of money in excess of their normal reserve requirements, by the banks, is one of the phenomena that will deserve close attention. The remedy for it lies outside the field of an elastic currency.

Now, as we have remarked, it may be rather early for a really academic view of this crisis. Nevertheless, I believe the necessity for a study of the lessons of the crisis is so great, the need for an understanding of these lessons is so pressing, that now, while it is all fresh in our minds, is the best of all times to begin a study of the problems raised.

Recently the newspapers have contained interviews with a large number of senators and congressmen as to the course of probable financial legislation. To my mind it was shocking to read the views of many of the members of Congress. They ran all the way from those members who thought nothing at all was necessary in the way of legislation to those who wanted to have the United States Government guarantee all the deposits in all the national banks and issue $300,000,000 of greenbacks. I am ashamed to admit it, but I presume the truth is that a series of interviews with well-known bankers, interviews with men bearing the most important relation to the country's financial work, would show as great a variation of opinion as did these interviews with members of Congress. I am afraid that the bankers would show, in some cases, as great ignorance of what is needed, and as little comprehension of the principles underlying any really intelligent reform,

as our senators and congressmen. That leads me to believe that there never was a time when education of the people in the principles of banking and currency was more seriously needed. The necessity for such education is reason enough for this inquiry into the lessons of the crisis.

The one great practical lesson, of course, is going to be that some form of expansive currency, a currency which will be related in volume to the commercial needs of the country, is necessary. Whether such currency be secured as a result of an extension of the powers of the treasury or by giving the right to all national banks to issue asset currency, or by the organization of a central bank, is one of the questions which a better educated public opinion is needed to answer. Whatever the answer may finally be, there are certain principles which we must learn to recognize and to apply to all discussions of this subject of an expansive currency.

It is, perhaps, fortunate that we have had an illustration of an expansive currency in the issue of clearing-house certificates which have been put out in many cities in the form of circulating notes and which will help many to see more clearly what really is the function of an asset currency.

One of the valuable lessons which we have learned from this financial disturbance is the interdependence of financial centers upon one another. New York had shown evidences of the approaching crisis for several months. There had been disturbances in the stock market, high rates for money, low reserves and other indications of a possible period of strain, but the great West and South, with seven billions of agricultural products, said, "We are independent. We have divorced ourselves from the people of Wall Street. They may have their troubles. We are strong enough to take care of ourselves."

London, Berlin and Paris did not feel the same financial independence that was felt by Oskaloosa and Podunk. Oskaloosa and Podunk believed that the wheels of prosperity would continue to turn for them with unabated speed regardless of what happened in New York. London, Berlin and Paris were deeply concerned over the situation as it was reflected in Wall Street. Now the whole country has come to see that there is no such thing as financial independence. It took hardly twenty-four hours from the disturbance resulting in clearing-house certificates in New York for the

difficulties to become national. The West and the South, rich and independent as they are, can now see more clearly that the whole country's welfare is pretty much bound together in a financial way.

Perhaps the most significant of all the lessons of the crisis, one that will, in the end, sink more deeply into our understanding than any of the others, will come to us when we comprehend the full weight of what it means to destroy confidence; what it means to destroy the confidence of the people in the financial leaders, to destroy the confidence of capitalists in the fairness of the people as reflected in legislation and in the decisions of the courts.

THE PANIC OF 1907 AND SOME OF ITS LESSONS

By Myron T. Herrick,
Chairman of the Board Society for Savings, Cleveland, Ohio.

Every American panic has been characterized by very similar events, which have followed each other in like sequence,—about as follows:

(1) Failure of an important bank or institution,—Ohio Life Insurance and Trust Company in 1857; Jay Cooke & Co. in 1873; Mitchell's Bank, and the Erie Railroad in 1893; and the Knickerbocker Trust Company in 1907.

(2) Heavy withdrawal of funds by depositors, and the failure of many financial institutions.

(3) Demoralized stock market,—affecting banks and depositors alike.

(4) Hoarding of money in large amounts, not only by individuals but by banks, and the partial refusal on the part of banks to pay out cash, resulting in a premium on currency.

(5) Large importations of gold,—$15,000,000 in 1873; $56,000,000 in 1893; and over $100,000,000 in 1907.

(6) Gradual improvement in financial affairs, resumption of specie payments, and disappearance of premium on currency.

(7) Acute trade reaction, discharge of many thousands of employees, and realization that the country must pass through a more or less severe industrial reconstruction.

The present financial disturbance apparently had its inception on the 15th and 16th of October, when it was first known that the Mercantile National Bank, of New York, was in difficulty. The embarrassment of this bank was closely connected with an operation in the stock of the United Copper Company. The stock of this company, which had declined severely, because of the fall in the price of the metal, suddenly advanced, in a few days, from thirty-seven to sixty, by reason of an attempt to corner the stock. Unfortunately for the operator who was engineering the transaction, stock which it was supposed could not be delivered was produced, and the firm of brokers backing the deal was obliged

to suspend. So far the episode differed little from an ordinary stock market fiasco, but when it was known that the Mercantile National Bank had supplied the funds for the attempted corner and was embarrassed thereby the affair took a more serious turn. The bank was examined, found to be solvent, and help was extended to it. Up to this time the public was not much alarmed, but on Monday, October 21, the Knickerbocker Trust Company, one of the largest institutions of its kind in New York, made an appeal for assistance, which was not granted and the company closed its doors at noon the next day, after a run in which more than $8,000,000 was paid over the counter. The failure of this large company demoralized the stock market. Call money advanced to 70 per cent and many stocks sold at new low records. Depositors in other institutions now began to lose confidence and commenced to withdraw funds. The Trust Company of America and the Lincoln Trust Company, both solvent institutions, were subjected to severe and prolonged runs. In the week following it was estimated that $40,000,000 was paid out by those two companies. At the same time Western banks began to make drafts on their New York depositories and during the week of October 21st, $14,000,000 was sent from New York City to banks in the interior. The withdrawal and hoarding of this vast sum by banks and individuals produced a most acute condition. On October 24th the panic on the Stock Exchange seemed almost hopeless. Call money was practically unobtainable,—only a few loans being made at 125 per cent. At two o'clock, when the demoralization was at its worst, a bankers' pool headed by J. P. Morgan loaned $25,000,000 at 10 per cent,—thus tiding over a situation fraught with the gravest danger. An appeal was made to the Secretary of the Treasury for additional government deposits and gold in large quantities was imported in spite of the fact that the Bank of England, to protect its gold reserve, raised its discount rate to 7 per cent, the highest in thirty-four years. Before relief was obtained from these measures, the reserve of the national banks of New York City had declined to more than $54,000,000 below that required by law. This was the largest deficit on record. Clearing-house certificates were authorized to settle the balances between the banks and a premium of 3½ per cent was paid for currency. The disturbance which, for a time, was confined to New York City

gradually extended and banks in most of the larger cities were obliged to use certified checks, clearing-house checks and clearing-house certificates to make up the deficiency in currency caused by its withdrawal from circulation.

At present, so far as the banks are concerned, the situation is gradually improving. Money is being brought from its hiding places and is again finding its way into the bank reserves and the premium on currency has disappeared. The deficit in the reserves of the New York associated banks has been made good and for the week ending January 11th a surplus was reported for the first time since October 26th. The statements just issued, pursuant to the call of the Comptroller of the Currency are, under the circumstances, unusually good, showing most of the national banks to be in normal condition, many of them holding a reserve in excess of that required by law. Two facts evidence the widespread extent and the violence of the panic. The premium on currency continued longer than in any other period in the history of the country and with a single exception it has taken the New York banks longer to repair the deficit in their reserve. One of the most striking features of the panic is the remarkable way in which the banks have stood up under the strain. In 1893, 160 national banks failed, while in 1907 but twenty-one were obliged to suspend, a number which has been exceeded many times in years in which there has not been a panic.

Such, in brief, are the salient features of the history of the past three months. If these facts afford an adequate explanation of the disturbance, and if from them alone we are justified in drawing a conclusion as to its probable length and extent, it would be safe to say that within a few weeks at the most industry would return to the highly prosperous state of a few months since. Such a conclusion, however, is not warranted. The course of the events of the immediate past is undoubtedly but the surface indication of a deeper and more important economic phenomenon. This belief is strengthened because we now know that the striking events of past crises were but outward manifestations of industrial and financial conditions. When the history of the panic of 1907 is written and its significance fully appreciated, it will undoubtedly rank with the epoch-making panics of 1893, 1873, 1857 and 1837. That the sequel will be similar to that following any of these other critical years, is not at all likely, for the immediate circumstances

that produce a financial or industrial panic are never the same, and it is these circumstances that determine the direction that the disturbance is to take as well as the duration and the severity of the depression that usually follows.

The periodicity of crises is undoubtedly a psychological phenomenon and is an expression of the rhythmic movement between hope and despair, optimism and pessimism, that has ever characterized society. So long as a man is a creature whose judgment is largely determined by his feelings, we are bound to have recurring periods of prosperity and depression. The form that a crisis in modern times takes is, to a large extent, fixed by the existence of credit in many forms and by the great accumulation of loanable capital. The crisis occurs when credit has been unduly extended and the supply of capital exhausted or so involved in unproductive enterprises as not to be available. In every period of business activity, capital is gradually absorbed, there is a heavy demand for funds for investment in new enterprises. As these new enterprises take form and develop, there arises an increased demand for all sorts of labor, from that of the lowest grade manual labor to that requiring executive ability of the highest order. Prices rise, partly because of the increased cost of production and also by reason of the greater demand on the part of better paid labor. The rise in prices, however, is always out of proportion to the rise in wages and thus the ability to save and create new increments to the store of capital is curtailed. If the absorption of capital is not lessened to meet the diminution in its creation, the time must surely come when the supply of capital is entirely inadequate to the demand and going enterprises are then severely hampered by inability to obtain funds sufficient even for ordinary betterments. It has probably never happened that such a situation is appreciated in time to gradually and easily curtail capital expenditures. It is of the nature of man to be swept along on a current of optimism, overdiscounting the future and investing large sums in enterprises whose present worth is largely overvalued. It is only when the breaking point is reached and the crisis is at hand that men come to a realization that credit is unduly extended and capital exhausted.

Since 1897, the year in which were recognized the first sure signs of the present cycle of prosperity, the train of events has

followed pretty closely the lines just indicated. The average of prices in 1907 was higher than at any time in over thirty years. For more than a year past, not only new enterprises, but old well-established industries and railroads have found it almost impossible to obtain the capital requisite to procure the equipment essential, because of the great trade activity. Some time since, many of the important railroads found that the only method by which funds could be secured was by the sale, at a discount, of short time notes bearing an unusually high rate of interest. From 1896 to 1907 the proportion of capital of all national banks to deposits has decreased from $1.00 to $2.46, to $1.00 to $4.82, and the proportion of reserve to deposits has decreased from $1.00 to $5.13, to $1.00 to $6.16. The aggregate resources of all banks was reported in 1897 at $7,822,000,000, and in 1907 at $19,645,000,000. On August 22, 1907, the loans of national banks amounted to $4,-678,000,000, the largest total on record. The percentage of reserves to deposits in national banks has shown a constantly declining tendency from 1894, when it stood at 32.7 per cent, to 1907, when it was but 21.33 per cent. In 1896, banks of all classes reported individual deposits of $4,000,000,000, with cash holdings of 10.72 per cent. In 1906, the banks of the United States had deposits of $12,000,000,000, with cash reserves of 8.3 per cent. Moreover, within the past ten years, there has been an enormous destruction of capital. The Boer War, the conflict with Spain, the Russo-Japanese War, the Baltimore fire, and the destruction of San Francisco, involved a waste of capital so prodigious as undoubtedly to weaken the stability of industry the world over. These facts and figures are representative of only a few of the indications of an overstrain on the capital and credit of the country.

If, then, what we have experienced in the few months just past is a real economic crisis, is there anything in the condition and circumstances of the country that would lead us to believe that the depression that always follows such a crisis is to be of a comparatively short duration and of less than usual severity? For the sake of comparison, it is well to take the panic of 1893, inasmuch as the organization of industry and credit at that time was more like that of to-day than at the time of any other crisis in the history of the United States. In almost every respect the country is in better condition than it was fourteen years ago. Possibly

the most important factor is the status of government finance. In the six months from January to June, 1893, the excess of government expenditures over receipts was $4,198,000, and during the fiscal year ending June 30, 1894, the excess increased to $69,000,000. It was even necessary to encroach upon the gold reserve for current expenses, and for months this fund was less than caution and prudence demanded. To-day the government has a working balance of something like $200,000,000, and while expenditures are now in excess of receipts, due to decreased imports, the balance in the treasury is so large as to afford a safe margin for falling revenues. The currency of the country is now safely on a gold basis. In 1893, the money of the country was in a chaotic state, because of the coinage of silver dollars under the Bland Act, and of the issuance of treasury notes of full legal tender to pay for the 4,500,000 ounces of silver bullion purchased each month under authority of the Sherman Act of 1890. It was only when the panic was well under way and the harm done, that Congress was sufficiently aroused to repeal the Sherman Act. Even after this pernicious measure had been wiped from the statute books, the sentiment in favor of the coinage of silver was so strong as to unsettle confidence for several years. The apprehension that existed, both in this country and abroad, as to the ability of the government to maintain gold payments, was one of the fundamental and effective causes of the crisis of 1893. This fear led to a rush to realize on all sorts of property before gold should disappear. British and other foreign investors hastened to get rid of their holdings before the distrust became so general as to cause a severe fall in prices. The excess of merchandise exports in 1892 exceeded the imports by $203,000,000, yet so great was the liquidation in securities of this country by foreigners, that we exported more gold than we received, by $495,000 in that year. Too much emphasis cannot be laid upon this point of distinction, that in 1893 we were threatened with repudiation, whereas, in 1907, the whole world has confidence in our ability to pay our obligations in gold. As a matter of fact, the favorable condition of the finances of the government, the stability of banking institutions, and the soundness of our currency and monetary systems, distinguish the panic of 1907 from that of any other in the history of the country. In 1837, speculative prosperity led to an enormous increase in the note issues of the state banks

made possible by Jackson's destruction of the second United States bank. Much of this circulation rested on inflated assets, and when the treasury issued its famous specie circular, July, 1836, requiring payment for public lands to be made in specie, the complicated credit structure collapsed. The panic of 1857 was precipitated by the vicious banking systems of the various states. In only a few states was the least attempt made to limit bank note issues or to see that the notes had proper assets behind them and the result was inevitable. The enormous issues of government securities, greenbacks, etc., to carry on the Civil War, resulted in overstimulating industry and unduly inflating prices. The crash came in 1873 when the maladjustment of production to consumption broke down the credit structure already overstrained. In recent times railroads and railroad finance have played an important part in every economic crisis. In the last decade, the increase in the mileage of railroads has been comparatively small and what expenditures have been made have been for the improving and extending of established lines rather than for the building of new roads into sparsely settled and undeveloped territory. The gross receipts of railroads are larger per capita of population than at any other period in the history of the country, and this is true at a time when rates have steadily decreased. There can be no question that our railroads are now on a most substantial basis. In 1894, there were 156 railroads operating a mileage of nearly 39,000 miles, in the hands of receivers,—among them were the three great systems,—Erie, Northern Pacific and Union Pacific. It is inconceivable that any such calamity should overtake us now. Of course, it is unsafe to predict the ultimate effect of the falling off in business on the earnings of railroads, but we do know this, that it was the poverty of the West that caused the railroad receiverships in 1893, whereas, to-day, one of the most reassuring signs is the great strength and stability of the agricultural districts of the West. In 1893, the railroads served a population of 66,000,000. They are now called upon to transport the products of 86,000,000. The world's output of gold has increased from $147,000,000 in 1892 to something over $400,000,000 in 1907, and the fact that the balance of trade is now well in our favor will enable us to secure and retain at least our share of the new metal with which to strengthen our bank reserves. The export of breadstuffs in November was of record propor-

tions, the value being $24,700,000 this year against only $15,416,-000 for the same month last year. This is the first panic year in our history when exports exceeded imports. For the year ending June, 1893, the import excess was $18,700,000, and in 1873 and 1857 the import excess was the largest on record. For the fiscal year 1907, exports exceeded imports by $446,000,000, which places us in a very favorable relation to international exchanges. In 1893, the exports of gold coin and bullion exceeded the imports by over $87,000,000. We have had bountiful harvests, and the prices of all products are high. The reverse of the condition obtained in 1893, when cotton was selling for 8 cents, wheat for 70 and corn for 48. The farmers of the country are especially prosperous, they are lenders, not borrowers, as they were fourteen years ago. These are but a few of the circumstances that distinguish the situation of to-day from that of the last economic crisis. The aftermath of the panic is now becoming apparent in the lessened bank clearings which are running about 30 per cent below those of last year. Prices of commodities are already substantially less than they were four months since. Each of the last three months has recorded a decline in the average price from that of the month preceding, aggregating about 11 per cent. Funds are already showing a tendency to flow to reserve centers, and it is quite possible that in this respect, the history of the panic of 1893 will be repeated. In February, 1894, about six months after the panic of the preceding July, the surplus reserves of the New York banks amounted to $111,000,000, the highest they have ever been either before or since. The gross earnings of some railroads have declined 50 per cent, and the average decrease for all the railroads of the country for December was over 10 per cent. The decline in railroad earnings can be attributed only in part to industrial conditions. Unwise and drastic state laws are having a most serious effect on the earning power of railroads. Already two large railroad systems have been obliged to ask for receiverships. It does not seem likely, however, that these decreases in industrial and railroad earnings will reach dangerous proportions and it is altogether probable that a few months of lessened industrial activity will restore the equilibrium between the demand and supply of capital and relieve the strain. Much, however, depends on the good sense with which the people meet the situation, and the extent

to which they retain their confidence in the basic stability of the country's industry and finance. The people, so far, have faced the changed conditions wisely and bravely.

Every such crisis brings into prominence some weak spot in industrial or financial arrangements. The incidents of the past few months have clearly demonstrated that our currency system is too rigid to meet the varying demands made upon it. It seems to have been a part of the sequence of every panic that an insistent demand should be made for an increased volume of currency. Mr. Bolles, in his financial history, says of the panic of 1873, "The number of remedies was marvelous, the financier suddenly appeared everywhere, and maturing his plans at a sitting, forthwith sent them to Washington." In 1873 the demand was so urgent that Congress passed a bill increasing legal tender notes by $44,000,000, a project which was wisely vetoed by President Grant. After the panic of 1893, the people persuaded Congress to give its approval to a measure providing for the coinage of $55,000,000 of silver, but President Cleveland followed the excellent precedent of Grant and blocked the bill by his veto. Both of these measures were the result of the clamor of an excited people, made desperate by distress. In the present instance, the demand for a more elastic currency is not the result of the pending disturbance, but the need for some change in our currency system has long been recognized. The currency famine of the past few weeks is only an exaggerated form of a trouble from which we have long suffered at the crop-moving period. What is wanted is not an increased issue of permanent inelastic currency, but authority for the banks to put into circulation, in response to the demands of trade, a bank note that will return to the bank of issue and be canceled as soon as the need is satisfied. A system of bond secured notes fails to adequately satisfy the need for currency for four reasons:

(1) It is inelastic. (2) It lessens the loaning power of banks by the amount invested in bonds. (3) It tends to withdraw funds from the locality where needed to the section where funds are cheap. (4) The volume of bond secured notes is determined by the price of bonds, rather than by the commercial need for currency.

The system of national bank notes in this country, secured by government bonds, is essentially irresponsive to the demands of trade and commerce. The need for additional currency is most

urgent in the fall of the year, from August to December, and yet from 1890 to 1906, a period of sixteen years, there was an actual decrease of bank note currency in the fall of three of those years, and in seven of those years the increase was not more than $3,000,000, whereas an expansion of $200,000,000 would not be excessive. In Canada, with a population of less than 6,000,000, there is an expansion and contraction of about $20,000,000 in the fall of each year; and in Germany the amount of currency varies about $120,000,000 every three months. This inelasticity of our currency is, in its final result, a tax on the agricultural interests of the West, for it is there that the demand for currency is most insistent and the inability of the banks to meet this demand is indicated by an increase in the rate of discount at certain periods of the year. Even in the face of great emergencies, bond secured notes have failed to expand in anything like the amount they should, and whatever expansion there has been has usually come after the crisis was past. On June 1, 1893, New York banks held a surplus reserve of $21,000,000, and the volume of outstanding bank notes was about $177,000,000. By the first of August of that year the demand for currency had become so intense that the reserves of the New York banks showed a deficit of $14,000,000, a loss of $35,000,000 in three months, and yet the outstanding bank notes had increased by only $5,000,000. By September 1st, when the urgency was past and currency comparatively plentiful, the volume of bank notes began to expand rapidly, reaching $209,000,000 on November 1st. In October, 1907, when currency was being hoarded and bank reserves were far below the amount required by law, the volume of bank notes increased by less than $6,000,000, but in November, when the situation was improving $50,000,000 of bank notes were issued. Not only do bond secured notes fail to expand in volume when needed, but they fail to contract in proportion to the lessened requirements of trade incident to the depression following a crisis and the result is redundant circulation and exportation of gold at a time when it is particularly needed in the rehabilitation of industry. Of the panic of 1893, Professor Joseph Johnson says, "During 1893, the fours of 1907 sold down to 113, and the banks added to their circulation $37,000,000. During the months of June, July and August of that year, there was a most urgent need for an expansion of the currency, but during these months the new national

bank notes did not appear. Not until the panic was over and the money was piling up in all the financial centers, a drug on the market, did the increase in the national bank note circulation take place. As a result of the panic, business being depressed, the interest rate on prime commercial paper during 1894, 1895 and 1896 was between 3 per cent and 4 per cent. The money supply of the country was in excess of its need, and gold was exported in large amounts." By the amount that a bank is required to invest in bonds to secure circulation is its loaning power curtailed. The statement of a bank with a capital of $200,000, deposits of $500,000, and bond-secured circulation of $100,000, would be as follows:

Assets.		*Liabilities.*	
Reserve	$125,000	Capital	$200,000
Bonds	100,000	Deposits	500,000
Loans	575,000	Notes	100,000
Total	$800,000	Total	$800,000

If, however, the same bank was permitted to issue notes based on assets and secured by the same reserves as deposits, its statement would appear as follows:

Assets.		*Liabilities.*	
Reserve	$150,000	Capital	$200,000
Loans	650,000	Deposits	500,000
		Notes	100,000
Total	$800,000	Total	$800,000

From these two statements it is apparent that the loaning ability of the bank is lessened $75,000 by a needless investment in bonds. The need for currency is greatest in rural communities where capital is scarce and rates of interest high and in so far as bonds are purchased to secure circulation, are such communities deprived of capital of which they have need. The amount is loaned elsewhere at a low rate of interest, in the form of investments in bonds. The record of the volume of national bank circulation, since the passage of the National Bank Act in 1865, shows conclusively that the amount of bank note currency outstanding has varied with the price of bonds and not with the needs of trade. This results in redundancy at some periods and insufficiency at

others, greatly to the detriment of industry. The use of railroad and municipal bonds to secure circulation would possess no advantage over the use of government bonds. A bond-secured circulation is unscientific and economically extravagant. This country has a great sufficiency of this kind of currency, and it would be a serious mistake to extend the system by permitting the use of other than government bonds. The Aldrich Bill, now before Congress, provides for an emergency circulation secured by municipal and railroad bonds. Such a measure does not reach the seat of trouble, and at best will only provide a partial remedy of questionable expediency.

After years of study and discussion, the American Bankers' Association, through its currency commission, has reached the conclusion that the only kind of currency that will respond easily to the need for such a medium of exchange, is that secured by the assets of a bank in the same manner as deposits are secured. The principles upon which the commission unanimously agreed are, in brief, as follows:

(1) A credit currency should be issued by national banks of the country under proper conditions.

(2) A bank note is essentially the same in principle as a deposit payable on demand.

(3) It is important in any plan seeking to provide a more flexible currency, that no measures should be taken that would impair the market value of United States bonds.

(4) Credit notes should be taxed at a rate that will produce a guarantee fund sufficient to redeem the notes of failed banks.

(5) Banks should keep the same reserve against credit notes outstanding as is now required by law against deposits.

(6) Active daily redemption of credit currency is the proper and only means of making it elastic, preventing redundancy and automatically adjusting its volume to the actual requirements of commerce.

Much of the opposition to the so-called asset currency arises from the failure of people generally to appreciate the essential similarity between a bank-note and a deposit, and also because of the fact that until within a very few years before the passage of the National Bank Act, note issues of banks exceeded deposits, and hence the losses and disturbances occasioned by improper

banking were attributed to over-issue of notes. Therefore, the absolute safety of bond-secured notes, as provided for in the National Bank Act, has fostered a prejudice against bank notes otherwise secured. It is probable, however, that had the proportion of bank notes and deposits in the early days been reversed, the losses due to unwise banking would have been equally severe. Frequent bank failures were due, not so much to the form of the demand liabilities of the bank, as to the nature of the loans that the bank made. It is not likely that we shall have a rational reform of our currency system until the similarity between the bank note and the deposit is clearly understood, and the prejudice against any form of security for circulation, other than bonds, is dispelled. That bank deposits constitute a medium of exchange as truly as bank notes, is not a new discovery. The principle was clearly enunciated by Alexander Hamilton in 1790,—"Every loan which a bank makes is, in its first shape, a credit given to the borrower in its books, the amount of which it stands ready to pay, either in its own notes, or in gold or silver, at his option. But in a great number of cases no actual payment is made in either. The borrower, frequently, by use of a check or order, transfers his credit to some other person to whom he has a payment to make. This man, in his turn, is as often content with a similar credit, because he is satisfied that he can whenever he pleases, either convert it into cash or pass it to some other hands as an equivalent for it. And in this manner the credit keeps circulating, performing in every stage the office of money, till it is extinguished by a discount with some person who has a payment to make to the bank to an equal or greater amount."

To illustrate the contention that there is no vital difference between a bank note and a deposit, take a specific instance. A jobber sells a bill of goods on time, sixty or ninety days, and desires to obtain the present use of his funds. He takes the note that he has received, to the bank, and has it discounted. He does not want gold, but what he does want is something that he can use in payment of his obligations and, accordingly, he receives credit on the books of the bank for the face of the note, less the discount. This credit is a demand liability of the bank, and is used by the depositor, by means of checks, as a medium of exchange. It is currency in every true sense, having the same effect on prices

as a like amount of bank notes. Suppose, however, that the bank had authority to issue, and the jobber desired and received bank notes in exchange for the notes discounted. The result to the bank and to the volume of currency in circulation is precisely the same. The bank has added precisely the same amount to its demand liabilities, and the volume of currency outstanding is the same, the bank note taking the place of a deposit. By making a loan the resources of the bank are increased in the form of a promissory note and the deposit, or bank note, on the liability side of the account, has the security of the assets behind the loan. For example, take the bank above referred to, with a capital of $200,000 and deposits of $500,000. If this bank issues no notes and holds a 25 per cent reserve against its deposits, its statement would be as follows:

Assets.		*Liabilities.*	
Reserve	$125,000	Capital	$200,000
Loans	575,000	Deposits	500,000
Total	$700,000	Total	$700,000

If, however, the bank has the power to issue notes against which it holds the same reserve as against deposits, the statement would be as follows:

Assets.		*Liabilities.*	
Reserve	$125,000	Capital	$200,000
Loans	575,000	Deposits	400,000
		Notes	100,000
Total	$700,000	Total	$700,000

So far as the bank is concerned, the situation in the first supposition is the same as in the latter, except that $100,000 of its loans had been made in notes instead of deposits. The aggregate of the bank's liabilities is the same as well as its resources. With the community that the bank serves, the situation is very different. By being able to offer to its borrowers the choice of a deposit credit or a note credit, the bank supplies the community with that form of credit instrument which it can use to the best advantage, thus facilitating industrial transactions to a much greater degree than would be the case could the bank only offer the deposit credit.

Mr. Henry Dunning McLeod, in his history of economics, gives a very lucid explanation of the similarity between the deposit and bank note. He says: "And as every advance a banker makes is done by creating and issuing a right of action against himself to his customers, and as a banker has an unlimited right of buying any amount of debts or obligations from his customers, by creating as many of these deposits, rights of action or issues, as he pleases, it follows that every banker has the right of unlimited issue; and a sudden increase of deposits is, therefore, nothing more than an inflation of credit, exactly similar to a sudden increase of bank notes. Deposits are nothing but bank notes in disguise." With the exception of a few savings banks, every bank in the country has the right to issue these credits, which are but bank notes in disguise. This fact should make it very clear that there would be no risk in permitting national banks to issue bank notes, called such, under proper restrictions. It should also emphasize the great need for legislation requiring banks organized under state charters, to carry sufficient reserves. Loans are usually based on mercantile transactions and, therefore, the deposits or bank notes have a security equal to the soundness of business generally, which, as a matter of fact, is all the security that is behind any credit instrument. The objection that asset currency would lead to inflation, is unsound, for the reason that whatever amount of such currency might be issued, would simply displace a like amount of deposit currency, as is shown in the two statements just given. Sound banking depends, not upon the form of demand liability, but on the kind of discounts made. It is on this point that great stress should be placed. As long as a bank's loans represent legitimate, sound business transactions and an adequate reserve is provided, the amount of credits, whether deposit or bank note, is comparatively unimportant. At the present time, the currency of the country can be unduly inflated solely through the medium of deposits, by the making of unwise and unsafe loans. It is proposed to further secure the bank notes by requiring the same reserve of gold, or its equivalent, as for deposits. Theoretically, there is no more reason for taxing a bank note than a deposit, but to absolutely secure the notes of failed banks, it is proposed to levy a tax sufficient to provide for such notes, and inasmuch as an average of about 2 per cent is paid on deposit balances, the tax on notes should un-

doubtedly be sufficient to off-set this. The notes of a bank differ from its deposits in this respect, that they are intended to circulate over a much greater area than the representatives of deposits, checks and drafts, and it is often impossible, or at least inconvenient, for the holder of a note to obtain reliable information as to the solvency of the bank upon which a note is drawn. It is essential, therefore, that a guarantee fund be provided to absolutely secure every bank note issued, irrespective of the soundness of the particular institution on which it is drawn. Approximately 95 per cent of all the business of this country is transacted by means of bank deposits, and this will continue to be the case, whatever form the currency of the country may take because of the superior convenience of checks as a medium of exchange. When currency is wanted, the need is imperative, as we have all learned to appreciate, and the banks should be in a position to satisfy that need. Deposits, since they originate in industrial transactions, and are permitted to expand and contract practically unhampered by legislative restrictions, constitute the most elastic medium of exchange ever devised, and if the banks of the country are ever to serve the community as they should, like freedom must be given to note issues. Unnecessary restrictions on the power of banks to issue notes are a serious handicap to industry. The desirability of an elastic currency is felt more strongly in the smaller towns of rural communities, where funds are needed to pay for farm labor, etc., particularly during the harvest time. Could the banks serving the agricultural districts offer to their clients bank notes instead of a deposit, the necessity for withdrawing currency from the East would be avoided as would also the return movement which creates a plethora of loanable funds in New York, unduly stimulating speculation and giving a wrong impression as to the plentifulness of capital and credit. An asset currency is not a new kind of medium of exchange. Practically every civilized nation of importance permits note issues secured in part, at least, by the general assets of banks. Canada, Scotland, France and Germany, all make provision for bank notes of this nature. The Reichsbank, of Germany, is permitted to expand its circulation without limit, but if the amount of note issues uncovered by cash in bank, exceeds 450,000,000 marks, the bank must either increase its coin reserve to cover the excess or pay a tax of 5 per cent on the amount over

the limit of 450,000,000 marks. Of this bank, Dunbar says: "The effectiveness of the elastic limit, in time of crisis, has never been severely tested, but it has been found to meet with much success, exceptional temporary demands for currency, which, under a rigid system of issue, like that of the Bank of England, could only have been satisfied by the withdrawal of specie or notes from the reserve. It is noteworthy that with one exception the limit has been only exceeded at the end of September and at the beginning of October, or at the end of December and the beginning of January, at the opening of the autumn or winter quarters of the year, when, for various reasons, there is regularly an increased demand for currency. In England, similar demands can be met only by withdrawal from the reserve of the Bank of England and through the temporary nature of such demands is well understood and in itself causes no alarm, the difficulties of the situation are thereby enhanced when the bank is trying to strengthen its reserve against more serious drain in other directions. Such demands the Reichsbank is enabled to meet, without difficulty, through the device of the elastic limit." Representative Fowler has prepared a bill for introduction into the House, which revolutionizes the entire currency system of the country, and its enactment would, without doubt, unnecessarily disarrange existing financial methods to the detriment of industrial conditions generally.

The laws of finance are as well known and as sure in their operation as the laws of physics and the problem before us is simply to apply these laws wisely. For many years, because of the conditions peculiar to this country, we were obliged to conduct our financial affairs along unknown and untried paths, the experience of the older countries did not afford suitable precedent for our guidance, but to-day we have reached a stage of development wherein we can learn much from the older countries, and it certainly is the part of wisdom to profit by their experience.

Should the present financial disturbance be the means of inducing Congress to pass a bill providing for an asset currency as outlined by the currency commission of the American Bankers' Association that would respond as easily and as readily to the needs of trade and industry as does the deposit currency, we might feel almost repaid for the discomfort and distress of the period. On the other hand, unless the present system of bank note

currency is modified in a rational and scientific manner, we must expect the periodical repetition of the disturbance through which we have just passed, for of all the factors that tend to develop unsound industrial conditions, a system of bank note currency that fails to expand or contract when it should, is the most potent. The plan proposed by the currency commission of the American Bankers' Association is the result of years of experience and study on the part of the leading bankers of the country, and for this reason, if for no other, it merits most careful consideration. It is undoubtedly the best plan now before the American people.

AN ELASTIC CREDIT CURRENCY AS A PREVENTIVE OF PANICS

By Wm. Barret Ridgely,
Comptroller of the Currency.

The commercial and financial conditions existing not only in the United States, but throughout the world, in the early part of October, 1907, which made a panic or crisis possible, were the accumulated and composite results of the business transactions of many years. A reaction in business was due and inevitable, in fact, it had for some time been in progress. The exact incident which precipitated the crisis and produced a panic, is not very material. If it had not been the collapse of the corner in United Copper stock, it might have come from the Westinghouse receivership a few days later, or from almost any one of a number of similar developments which were not only possible, but probable.

The expansion of business and inflation of credits, whether based on transactions which would be classed as perfectly sound and legitimate, or on semi-speculative ventures, or on speculation pure and simple, had reached the point where there had to be some settlement and liquidation. While it might not be difficult to assign any single transaction to one of the before-mentioned classes, it is impossible to separate the results on the general business situation and say just which added to and produced the catastrophe and which did not, how much was due to legitimate enterprise and how much to speculation. The time had arrived when some one had to pay the penalty for the indulgences of the past. The reaction and liquidation were not only absolutely inevitable, but necessary and desirable, in order to bring business of all kinds back to its normal condition. This should have been accomplished, however, in a much more orderly, quiet way, as it had been taking place for months, without the resulting excitement and foolish sacrifices incident to any condition of panic.

There never is any necessity for a panic and this, of all others, should never have taken place because the conditions did not justify it in any way. Least of all, should we have had a

panic among the banks, and this particular panic might easily have been avoided. In its place we might have had a more reasonable and orderly readjustment of credits and values if we had had a better system of currency and a better system of banking, both national and state. A better system, I say; not better banks.

We would also have been in a very much better position if the relations between the business world and the Treasury Department had been on a different basis: if the Treasury Department had been either entirely out of business and free from responsibility as to business conditions, as it ought to be, or if, being in business, it had had the proper facilities to deal with the situation as it arose.

I have no criticism to make of the operations of the Treasury Department, but on the contrary, from my experience during the three administrations of Secretaries Gage, Shaw and Cortelyou, I believe they are all entitled to the highest praise and commendation for what they have done to make the best of bad situations, with antiquated, complicated and cumbersome facilities, often little better than mere make-shifts.

Mr. Cortelyou, for instance, has done splendid work in the relief he has rendered in the last few trying weeks, by distributing government deposits and stimulating bank circulation, when it was so desperately needed. He has shown himself to be a strong, courageous, resourceful man, in a great crisis, and is entitled to all credit for it. The deposits of the government with the banks, have been very potent in checking the panic and restoring confidence, and on this account we find many men commending such a system of government finance. It is true the most has been made of it, and it has been done with not only fine ability, but with absolute fairness, with no end in view but the public welfare. But look at the situation. The United States Government has collected from its people $245,000,000 surplus, above its necessary expenditures, and in order to restore this money to circulation and repair the damage done to business by its withdrawal, has had to deposit $222,000,000 with the national banks; and when the supply of government bonds gave out, has had to accept various other bonds as security.

This is all that could be done under the circumstances, but the surplus should never have been collected to such a vast sum. The government should not take money from you and me when we

need it, just to keep it on hand as a panic fund. It is no proper governmental function to tax people for such a purpose. If it is conceded that the government should take a hand in such business, what an awkward, complicated method it has of doing the business. What a wasteful use of the money available.

The government should collect its revenues and make its payments as every one else does, through regular banking channels. The money should stay in the banks and the smallest possible amount should be withdrawn from circulation. If the national banks are not satisfactory for such use, we should have a central governmental bank to do the government business. The funds left in its hands would be available for use by the other banks for business of all kinds, either as reserves against circulating notes issued, or as loans and rediscounts to the banks. With such facilities as this at its command, the Treasury Department could prevent panics and keep business steady, instead of only being called in like a doctor to see a patient after he has become desperately ill. What we need is better hygienic and sanitary conditions and less medicine. The whole system is wrong, and requires change and readjustment.

While we are yet probably too close to the incidents of this panic to be able to properly judge of the causes and effects, we may now, while these matters are fresh in our minds, and their results have been brought home to us with such force, take account of those things which have made the trouble, and at once begin to devise means not only to repair the damages done but, much more important, to foresee the future, and make provision on proper principles for such changes as will avoid such troubles, or mitigate the effects of the disturbances which cannot be prevented.

It is needless to go into details as to the events which produced the business conditions existing in the United States for the last six months or a year. Everyone is familiar with the great expansion in business of every kind which has taken place all over the world. Probably the most potent factor in all of this, if it is not the sole cause of it, has been the enormous increase in the production of gold, which has more than quadrupled in the last few years, and is now at the rate of about $430,000,000 per year. It is this, more than anything else, that has more than doubled

selling prices of wheat, corn, cotton, pig-iron, steel, copper and all the great staple articles of wealth which are the basis of all modern commerce. While this was going on, it was absolutely inevitable that there should be a great increase in the volume of credits not only in all the banks, but between merchants and manufacturers, between wholesale merchants and retail merchants and so on, through all the lines of business transactions. There is no country in the world, and no line of business, which has been free from it. It has led to an increase of what may properly be called legitimate investment values not only in mines, manufactures, and mercantile concerns, but in real estate of all kinds; city and suburban lots, farms, and tracts of timber. It has increased the prices of not only sales and transfers of the actual properties themselves, but of mortgages, stocks and securities based on them.

It is not only natural, but probably inevitable, that all this expansion should be overdone, for side by side with the transactions of men who are making such investments carefully and conservatively, based on real values, were those of men who, some through lack of judgment and over confidence, and others through dishonesty, were promoting schemes and issuing securities based on far higher values than were justified. This universal process of expansion and increase of values has been, on the whole, based on sound conditions and justified by the facts, but it has been evident for several years that we were approaching the crest of the wave, and there must be some slackening of pace and almost inevitably some reaction or decline in prices.

It must be remembered that this expansion started from the abnormally low values and basis which had followed the crisis and depression of the year 1893, and the few years following. Wealth at that time was measured on an abnormally low plane of values. It was not only perfectly proper, but highly desirable, that they should be increased. This has gone on, however, as events have shown, until the limit has been reached. The natural limit of all such movements is the amount of reserve money which can be held by the banks as the basis of their credits. The proportion of this has been growing less and less for several years, and for at least two or three years there has been a condition of scarcity of reserve money not only in the United States, but in all other countries.

Another important factor, and in some respects the most important, is that such an enormous proportion of the existing credits has been transformed from liquid capital into fixed capital and investments, leaving a scarcity of liquid capital for the enterprises which were in operation. It has been this, more than anything else, probably, which has led to the necessity for a contraction of credits and more or less liquidation.

During this whole period of active business, there have been many times when conditions have brought about violent reactions in the stock market. There have been several stock market panics, notably such as the one which occurred March 9, 1901, any one of which might have produced a far more serious bank panic than that which occurred in October, 1907, if business conditions had not been found so entirely sound that the disturbance was practically confined to the stock market alone.

During the past few years there have been several periods of marked depression although they have not been of long duration, nor accompanied by any considerable number of failures. Why, then, should we have had a banking panic of great severity in October and November, 1907? It cannot be that it was entirely due to speculation, for this existed in much less volume when the panic occurred than it has in several other periods when it produced stock-market panics. The more speculative loans were far less in volume in October, 1907, than they were a year ago. The main difference in the situation must have been that we were one year farther along in the period; that the whole world had come to realize that there had to be a readjustment; that many of the largest and strongest concerns, as is well-known, found difficulty in renewing their old loans, and foresaw that they were soon to be compelled to reduce the volume of their operations.

Conditions during the summer of 1907 were becoming more and more acute, and were greatly strained when the demand came for the crop-moving funds. The total volume of credits was up to the maximum that could be carried on the reserve money available. When the withdrawal of deposits in the demand for crop-moving money came, it was necessary for the banks to supply this with reserve money. As far as this money had to go into circulation outside the banks, it made a reduction in loans to that extent inevitable.

If our system had been such that the country bank first, then the reserve city bank, and finally the central reserve city bank, could have supplied some form of credit notes in payment of their deposits, the situation would have been entirely different. If we had had such a system of notes as they have in Canada, for instance, which expands quickly and automatically in the fall of every year, when this demand comes, and contracts just as surely by February of each year, there need have been no apprehension in regard to the crop-moving period. There would have been no variation in the volume of credits at all. Reserve money in the banks, which was ample for the deposits, would have been ample for the credit notes, if they had been available.

It need have made no difference at all in the total volume of credits. The total of note credits and deposits would have remained the same with the same reserve against them. No one need have cared how much the people changed their credits from one form to another, and there would have been no panic among the bankers as to the effect of a demand for current cash. There need have been no disturbance of payments, collections, or remittances. People who were insolvent or too badly extended might have suspended or failed, but the man who was in good solvent condition need not have been fearful, least of all panic-stricken.

Instead of this every banker was at once compelled, in self-defense, to increase the amount of cash on hand. That is, instead of maintaining his reserve at practically the same point and changing his deposit credits into note credits, he had to meet his deposit credits in reserve money, and to call upon his reserve and central reserve agents for it. When a demand of this kind came suddenly upon the country it was not surprising to find that deposits which had been counted on as reserves were not reserves at all because they were not available. This developed at once the two inherent weaknesses and defects in our banking system; the lack of any elasticity or expansibility of the currency, and the uncertainty of the system which piles reserve on reserve, first in the reserve cities and then in the central reserve cities.

The way to cure this trouble and prevent recurrences of events of this kind, is to give the banks and the people who are their depositors some proper system of elastic credit notes and to compel banks to carry against these notes and their deposits, larger reserves

in cash on hand, and keep their reserves in other banks where they will surely be available.

The experience of all the rest of the world, in every important country, has shown that the best way to accomplish this result is by means of a strong central government bank which will handle the finances of the general government, act as reserve agents for other banks and have the sole right to issue credit bank notes. This bank should be under government control, and subject to severe government supervision and inspection.

Among students of these problems the opinion is steadily growing that until something of this kind is done in the United States, we shall never have such a financial system as we should. With such an institution as this in operation, there could have been no excuse at all for such a panic as occurred this fall. Months ago, a central bank could have brought about such a gradual contraction of loans, and such reduction in the volume of business, as would have enabled us to meet this situation quietly and calmly without anything approaching a panic. Speculative corners might have collapsed, trust companies with large lines of commercial deposits unprotected by reserves, and invested largely in speculative ventures might have failed or have been liquidated, manufacturing concerns with inadequate capital attempting to do too large a volume of business with borrowed money might have been forced to suspend or submit to receiverships, mercantile concerns which had been able, through note-brokers, to dispose of such a volume of notes that their failure to renew brought on embarrassment might have been tided over and given extensions;—all without any bank panic if we had only had the advantage of a great public bank. The people who are engaged in smaller lines of business would thus have been spared the losses and embarrassments due to such conditions as have existed within the last few weeks.

As long as modern business is conducted on credit, as it must be, there will inevitably be periods of expansion and inflation which are inevitably followed by periods of liquidation. No one has ever suggested any means by which this can be avoided. With the knowledge that such conditions must exist, it is the highest duty of the government to provide proper means for dealing with them. Until this is done, we have only ourselves to blame for such a panic as has occurred within the last few weeks. It is

useless to blame it to speculation. It will not cure the evil to prohibit speculation in grain futures, or trading in stocks on margins. These are all only incidental to the great movements which we have been tracing. They do not cause the expansion of business, and do not bring about its collapse. It is still more unjust to blame such a condition upon the national administration, the acts of the legislative authority, or of the administrative officers.

Nothing can be more unfair and unwarranted by the facts than the efforts of his enemies and critics to put the blame of this panic on President Roosevelt. He is in no way to blame for the general conditions which were world-wide and far beyond the power of any man to prevent. He is not in the least responsible for the special incidents which started the feeling of panic among the banks, and led them to go to clearing-house certificates and a partial suspension of payments. There is far more blame due to those critics of the President who, for months before there was any condition approaching a panic, seized upon every remark made or action taken by him, and predicted its disastrous effect on business.

If this panic is in any way due to talk and prediction, the President's critics have done their utmost to produce it by their doleful lamentations and pessimistic predictions of what would happen if the President did not change his policies in regard to the enforcement of the laws. It is significant that the trouble started, and has been worst, in New York, where there has been the most criticism and abuse of the President and where he is supposed to have the most opposition. There has been less panic and trouble in the country, in the West, and among the smaller business men and the working people where the President has always been the strongest, and where anything he has said or done would surely have the greatest effect.

This whole episode has been more a panic among banks and bankers than among the people. Except in the City of New York, there has been surprisingly little excitement among the people, and very little distrust of the banks. That there have been so few failures and that the panic has been no worse, has been due to the intrinsically sound condition of the banks and the business of the country, to the wonderful courage, patience and forbearance of the business men and people. They have quickly adapted themselves to the necessities of the situation, and availed themselves

of every possible temporary expedient to get along until the excitement was past. This has been especially true of the working people and the smaller depositors, who in many notable instances, have acted in concert with great coolness and deliberation, to support their local banks and to share their portion of the burden.

The critical period has passed with surprisingly few failures. Conditions are improving daily; banks are resuming payments and remittances, and the panic is a matter of history. We have yet to face some depression in business, and have to undergo the somewhat painful, but very necessary process of reducing expenses, practicing economy, and paying our debts. But there is nothing that pays an individual or people better, and when matters are readjusted, and prices are on a better and more stable foundation, no one who knows our country and people, our resources and powers of recuperation, can doubt that in a short time our business will again proceed on a sounder and more durable basis. Our prosperity, while less spectacular and sudden, perhaps, will be greater than ever before.

THE READJUSTMENT OF OUR BANKING SYSTEM AND THE UNIFICATION OF THE CURRENCY

By Hon. Charles H. Treat,
Treasurer of the United States.

The importance of remedying the confused condition of our many issues of paper currency and relieving the stigma of discredit that has attached thereto for a great nation like ours has been a favorite topic of discussion for several years among students of finance. It would seem desirable that such modifications should be made as would bring about a more harmonious unification of currency issues.

It is not to be denied that formidable obstacles to securing such a result exist, more especially in overcoming the prejudices in the public mind and the views of legislators, who hold with great tenacity long-cherished ideas on the efficacy and wisdom of a retention of the "greenback," and the opinions of the silver doctrinaires who believe in basic money as the safest and most desirable form of circulating medium. Our conglomerate currency issues have been largely the growth of a necessitous condition that has been met by temporizing legislation; therefore this must be the excuse for the weakness and helplessness that has produced such an unsatisfactory currency system.

As we come out into the light of national strength and independence, we look back with a more critical eye upon present financial aspects and their origin. It is, however, encouraging that we as a people are restive over the disclosures thus made. There is an undoubted sentiment that something should be done that shall place our monetary system upon such a broad and comprehensive basis as will be lasting in its beneficent workings and stand the test of time, not only for half a century, but for an entire century.

In view of these facts, I offer a plan that is more in the nature of a suggestion, but which I hope may incite intelligent examination and discussion that shall evoke something of value in response to the yearnings of those who would like to see a remodelled currency system, a plan for national finance that should not be discreditable to our intelligence and our experience of to-day.

Retirement of United States Notes

(1) I advise legislation by Congress, authorizing the Secretary of the Treasury to retire United States notes in sums not less than 50 millions nor exceeding 100 millions per annum. The payment of the United States notes and the releasing of the reserve fund for their redemption would give a legal reserve of about 350 millions in gold for banking purposes.

Public sentiment is once again agitating the desirability of utilizing the advantage of an overflowing national treasury for the gradual retirement of United States notes or what are known as "greenbacks." The minimum sum, $346,000,000, has not been changed since Secretary McCulloch was instructed by Congress not to retire any more of these notes and when Congress declared that that amount should remain in circulation. Since that time there has been periodical agitation by bankers and financial students to secure a revival of the practice of Secretary McCulloch of retiring "greenbacks" when the surplus of the treasury allowed such a step, under the enactment of February 25, 1862. Various objections have been raised to this among others, that it would cause a contraction of the currency on the part of others, that it would destroy in a measure the amount of reserve money which was not at all excessive for banking use; and by others, that there would be a saving of interest.

The increased supply of gold would seem to be an assurance that there need be no apprehension of a lack of a sufficient legal reserve, in case 20 or 50 millions per annum of "greenbacks" were replaced by gold coin. It has perhaps escaped popular attention that we have over 150 millions of coin and bullion held in reserve against the issue of 346 millions of greenbacks, which leaves an approximate currency supply of $170,000,000 available for circulation.

The permissive circulation of United States notes is 346 millions. Of this, there is an average of 26 millions held in the vaults of the treasury, which, taken from this sum leaves 320 millions in actual circulation. There is now a reserve fund of 150 millions in gold for redemption of United States notes. Taking this from the 320 millions leaves only a practical gain to circulation of United States notes of 170 millions, provided that the reserve fund of 150 millions were not released.

The saving of interest can, therefore, only be reckoned on 170 millions, which, at 2 per cent, would amount to about $3,700,-000 annually. The saving of interest to the government is but a small item for a circulation of $170,000,000.

If the gradual retirement of greenbacks were known to be the settled policy of the government, this would give rise to an enhancement of the credit of the country, and the financial repute therefrom would far outweigh any paltry saving of the interest account. Such a step would convince the international investor that gold was the legal and established standard of the country, and that he might confidently feel that his investment would be returned to him in gold, on demand. It would promote a larger growth of the national banking system, which is doing so much to uphold the credit of our securities. It follows, therefore, that no apprehension need be felt of calamitous results from a gradual retirement of the greenbacks.

Retirement of Silver Certificates

2. I advise the retirement of all outstanding silver certificates—about 475 millions—and the issuance therefor of 2 per cent United States fifty-year bonds for an amount not exceeding 50 to 100 millions per annum. The silver dollars so released from pledge in paying off silver certificates could be utilized for the government's need of subsidiary coin. This would do away with the purchase annually of a large amount of bullion, which in the past year amounted to nearly nine million dollars.

3. The retiring of these two kinds of money—United States notes and silver certificates—would do much to complete the unification of the currency, as national bank notes and gold certificates would be the only currency used.

4. I would advise that the present issue of national bank notes be retired, and that the government bonds so pledged for circulation and payment be redeemed by a special bond known as a "banking bond," bearing interest at 2 per cent for a term of not less than fifty years; and that such bonds as are now held for circulation should be redeemed and paid for at a premium of 5 per cent to reimburse the average cost to the investor, as the government should not require the banks to pay more money than they actually receive therefor.

I advise that the sale and purchase of these banking bonds should be under the absolute control of the government, and that when a bank desires to retire its circulation, the government shall buy the bonds at not less than par and without premium. This will do much to prevent the daily speculation in government bonds which not only causes fluctuations in price, but affects the volume of circulation without regard to business conditions. The bonds so purchased should be destroyed. The denominations of these bonds should not be less than $10,000 nor more than $100,000. The bonds to be issued for the retirement of silver certificates should also be banking bonds as before described. This would furnish the basis of additional circulation without contracting the volume of currency and the total amount of 500 millions, which is the measure of the volume of silver certificates, would then be reissued during the term of ten years in the form of national currency.

Some one might make objection to the retirement of silver certificates, in that there may be no legal reserve money to take its place, but in the gradual retirement of silver certificates to the amount of 50 to 100 millions per annum we could fairly look for an adequate supply of gold. The volume of gold production is now over 400 millions annually, and our country is *increasing* its gold output in comparison with other nations.

United States National Bank Currency

5. The new issue of bank notes should be known as "United States National Bank Currency." This designation would give it an *international* recognition, and the sentimental effect of such a designation would inspire world-wide confidence in its genuineness and its financial responsibility.

I would advise that simplicity of design of all notes be carried out in the different denominations, and that the distinction should mainly be upon two points: first, the denomination itself, and second, a vignette differing for each denomination issued. This would give such uniformity in size and appearance, that the note would easily be recognized and would be more difficult to counterfeit. The denomination numbers should be *large,* so that the counter could not fail to see the same clearly at a glance. A vignette is said to be the most difficult thing to counterfeit, and experience has proved that

the least embellishment on a note affords the greatest protection against counterfeiting. The different banks using this new circulation would be known only by the numbers printed on each note.

A sentimental objection might be made to the elimination of the individuality of the bank note, but when the facts are taken into consideration, it is well known that it is very seldom that the holder of a bill looks at the signature, his only concern being that it bears the impress of guarantee by the United States government.

This uniformity of size and design would be less expensive to prepare, and a large quantity of currency could be kept on hand which would be applicable to the needs of any banker. The only names of officials attached to said notes would be those of the Comptroller of the Currency and the Treasurer of the United States.

These notes should be issued in such a percentage of denominations as would meet the existing and growing demands of business conditions. All banks should be required to take out such percentage of ones, twos, fives and tens as would meet the requirements of business. The same form of note would provide for a permanent, as well as an emergency or "supplemental" currency.

The guaranty of the government on said notes would simply be expressed thus: *"This note is secured by bonds deposited with and guaranteed by the United States."* Three hundred millions of these notes should be held in reserve for additional circulation, and as they would be used in common by every national bank, there would be no risk in so doing. There would also be a lessened expense in repairing and issuing the same.

This re-adjustment would not only unify the currency, but in its simplified design, would avoid the well-deserved criticism of confusion in our monetary forms of currency, and make it more acceptable in all the money markets of the world. This unification of the currency has long been desired by large numbers of the American people, but no feasible plan has been put forth. These notes would be acceptable for taxes and other purposes in the same way as the present national bank notes, which would be in supply until all the silver certificates had been called in and canceled.

There might be objections on the part of some devoted advocates of silver, that it is the money of the people, and that they

would oppose its withdrawal. The records of the Treasury show that the demand for silver dollars over that for currency, arises mainly from the fact that the transportation of the silver dollar is made *free by appropriation from Congress,* whereas there is a charge for the transportation of currency. This was abundantly demonstrated last year when the appropriation for free transportation of silver dollars was exhausted and the demand therefor was reduced nearly *seventy-five per cent!* When a new appropriation was granted silver dollars were given in demand because transportation was made free.

It might be further objected that the retirement of silver certificates would make an additional interest charge of some ten million dollars to the American people, but it must be considered that there would be a great saving to the government in the profit of utilizing the silver dollars for subsidiary coin, and also in the lessened expense of furnishing currency of one simple uniform design, and in the saving of loss to the government by the abrasion of silver dollars. This is a large item in the Treasury to-day, as not less than a million dollars are short-weight, and probably on a closer investigation, this amount might be largely increased.

The paramount question, however, is not simply one of saving a small amount of interest, but it is, what would be to the greater advantage, convenience and profit to the American people? It would seem to me that now is the time, when far-reaching amendments are needed to the laws of our banking system, to so construct a system of finance which, while it shall be absolutely safe and desirable in its appearance, shall also have the elements that are needed not only for a permanent but for an emergency or supplemental circulation.

I append hereto my well-known views on the supply of a supplemental currency, which needs no further elucidation. This whole plan, as I have outlined it, would not only accomplish a fundamental re-adjustment of our banking system, but would, I believe, meet the demands of the American people to-day, and likewise the needs of fifty years hence, when the population of the country shall have largely increased and the business needs be correspondingly enhanced.

It would seem that our requirements are peculiar to ourselves and cannot be likened to those of any other nation. We grow crops

to the value of over seven billion dollars and manufacture to the amount of fifteen billions. Legislation should therefore be so comprehensive that an adequate amount of currency could be issued, under proper legal forms, that would always provide sufficient funds to move the crops without an exorbitant tax such as is advocated by the friends of asset currency, which would seem to penalize the grower for producing excessive crops or the manufacturer for making an enlarged output.

There should be a broad distinction between the use of a supplemental currency for recurring autumnal needs, and an emergency currency in time of panic. What this country needs is not only an enlargement of banking credit at crop-moving seasons, but also the establishment of a system whereby the panicky conditions that recur every seven or ten years may be met.

The present National Banking Act should be so amended as to permit any national bank with not less than 50 per cent of its capital invested in United States bonds, to issue national emergency or supplemental currency not exceeding the remaining 50 per cent nor more than its capital stock. Such emergency notes I would have similar in form and design to our present national bank notes, but the guaranty thereon should be modified to read: "This note is secured by bonds deposited with and guaranteed by the United States." The issue of these notes might be made in four, six or eight months, dating from August 1st or September 1st, as may be needed at crop-moving periods.

I would accept collateral for this supplemental currency issue in the form of state and municipal bonds that meet the requirements of savings banks investments in the States of New York, Connecticut, Massachusetts and New Jersey, such securities to be accepted at 70 per cent of their market value. I would have the bank make a collateral note to the order of the Treasurer of the United States on four, five or six months, and should it fail to meet the notes at maturity, it should be penalized in the sum of 2 per cent per month, until paid; the United States Government to guarantee the redemption and payment of all notes so issued, at a charge of about 3 per cent. I would not extend the selection of bonds to other than those of states and municipalities which have the government power of taxation behind them, as it would be well,

in my judgment, to limit this class of bonds and not open the door to the acceptance of railroad, industrial and real estate bonds.

How Inflation Would be Avoided

This plan requires a margin of 30 per cent on the amount of notes issued, which, it would seem, would be ample in every contingency to safeguard the government. These notes would have a definite time for maturing and when they were paid for, so much currency would be retired which, practically in a compulsory way, would prevent any permanent or undue inflation of the currency. As to the amount of issue, Congress could determine it, based upon the outstanding issue of national bank notes, permitting an increase of $33^1/_3$ or 50 per cent, in addition to the regular circulation.

This plan would give practically all the advantages of a great central bank, as far as the issue of currency is concerned, without the drawbacks of mixed responsibility or adding to the confusion of another form of currency, which there would be if a great central bank were permitted the right to issue its notes. It would seem that making the interest rate about 2 per cent is already too low. It might be increased to 3 per cent per annum—1 per cent more than interest on United States bonds—what the national banks now pay in semi-annual duty and taxation on circulation. If good collateral be furnished, why should the people be compelled to pay any higher rate?

Some criticism has been made that a larger percentage of loans than 70 per cent could be made on good state and municipal securities, but it is of importance that the price of United States 2 per cent bonds should be safeguarded, and that their supremacy as a security should be upheld, whereas if too large an advance was made on other bonds, the credit of the 2 per cent would be impaired.

Interest should Not be Excessive

It has long been the practice in finance that the borrower who gives the best collateral secures the loan at the lowest rate of interest. If the currency was issued on the general assets of the bank, without compulsory retirement, the risk would be greater and the rate of interest increased. An excessive rate of tax is not to be considered in this case, because the issue of supplemental

currency is applied to a normal condition of business that recurs every autumn.

Adequate monetary facilities should be provided to move the crops without disturbing the normal conditions of banking business that prevail throughout the country. The crops cannot, under present conditions, be moved without a great disturbance, by the calling of loans amounting to $250,000,000 or $300,000,000.

To meet this exigency it is important that a supplemental currency should annually be issued at a low rate, at moderate cost and with specific security, as is now required for the issue of all bank notes. This supplemental currency should be so liberal and attainable in its terms that the burden of the accommodation would scarcely be felt.

The advocates of asset currency propose that an issue of bank notes be made, based upon the general assets of a bank and taxed at a high rate of interest. To this conservative men demur, because the security behind the notes would not be sufficient to guarantee them, the assets of a bank not being proper security for the issuance of notes, even with the addition of a reserve redemption fund.

What the farmer, the manufacturer and business man generally need is to have banking accommodations at a moderate cost. It would seem that those whose productions are so large, whether from the field, the factory or the mine, should not be penalized by a high rate of interest for the use of money at every recurring crop-moving season. If safe collateral be furnished the charge should be at the lowest rate of cost of issuing and redeeming the supplemental notes.

Repeal Tax on National Bank Circulation

The national government now has a monopoly of our currency. Therefore it should not withhold from the people this inestimable service, when good collateral approved by bankers can be given for the currency furnished. It might be well to repeal the tax of one-half of one per cent on bank circulation and also permit banks to take out additional supplemental circulation to the extent of the premium on bonds now pledged for redemption of the bank notes.

I feel justified in making this suggestion that the charge against issuing the supplemental currency be no more than 3 per

cent per annum, for as the government charges no interest on its public deposits, why should it do so for loaning its credit? It is only as rational an expansion of the privilege to loan the credit of the government in the form of national bank notes as it is to loan the government's money under the name of deposits.

It does not seem to me that any valid objection could be made to the issue of such supplemental currency under government control. This plan would seem to me a natural evolution of the custom of national banking. It does not commit the government to any untried or hazardous experiment or confuse the public mind with the idea that there is to be any radical departure from the present system of banking.

No danger lurks in the plan. Seeing as I do every day the importance of affording additional relief to the business interests of the country, I offer a plan that does not pretend to be a panacea, but is, I believe, not the dream of a financial visionary. I am no "faddist" on currency reform, and am looking only for the attainable, and for a plan that shall commend itself to the common sense of the American people as safe and practicable.

THE NEED OF A CENTRAL BANK

By George E. Roberts,
President Commercial National Bank, Chicago, Ill.

The financial panic and general suspension of cash payments by the banks of the United States, with the sudden paralysis of business resulting therefrom, did more to convince the people of the country that there were still serious defects in our currency system than all the arguments to that effect that had ever been made. Wall Street had been suffering from hard times since early in the year, quotations for securities had been going down but the prosperity of the country's industries seemed to be untouched. No doubt it was inevitable that such conditions in the security markets would eventually affect the industries, for when stocks and bonds are unmarketable the supply of capital for new enterprises is cut off. But a partial explanation for conditions in Wall Street was to be found in the glut of securities which had been poured out to support undertakings which are even yet uncompleted. The fact is that no recession in business was observable up to the date of the panic. The suspension of cash payments, the consequent inability of employers to obtain money for pay-rolls, the fright, and cancellation of orders, came on the general business community like a stroke of lightning from a clear sky. Since then few have disputed that currency reform is needed.

But there remains the difficult task of uniting public opinion upon some plan. Broadly speaking, three policies are proposed. First, a modification of our present system of bond-secured currency, by allowing, under a high tax, temporary, or emergency issues upon miscellaneous bonds. Second, the plan adopted by the American Bankers' Association, or something similar, allowing all national banks to issue credit notes against their general assets, secured only by a common guaranty fund. Third, the establishment of a central bank of large capital, which should exclusively perform the function of issuing credit notes to meet the varying needs of trade.

The first of these plans is confessedly a make-shift. Its advo-

cates do not claim that it should be accepted as a finality, but only that it is the best measure that can be enacted in the present unsettled state of public opinion. It would be inoperative in an emergency unless the banks set aside permanently a part of their resources for that class of investments, as a measure of insurance. They might do this, but it would be at a sacrifice of earning power, and effect a corresponding curtailment of the banking capital available for current use. Furthermore, the plan contemplates emergency issues solely, and there is no claim that they would be responsive to the ordinary fluctuations of trade.

The second plan, offered by the American Bankers' Association, is more comprehensive, and contemplates a genuine credit currency. It is, however, something of a compromise, the issues being limited to forty per cent of a bank's capital, and dependence against over-issue is placed in part upon this restriction, in part upon facilities for redemption and in part upon a graduated tax. Without going into an extended discussion of this plan, it may be said that it has never been tried under the conditions which exist in the United States, and the very restrictions imposed add something to the uncertainties. The success of the plan would depend upon the regularity and rapidity with which the notes were redeemed. The scheme itself contemplates that the self-interest of the individual banks will prompt them to return the notes of all other banks for redemption; but that is a practical working detail, the success of which, in view of the great number of banks outside the system, cannot be positively foretold. The state banking institutions would have no interest in promoting redemptions, as they are allowed to use the notes of national banks for reserves.

The first argument for a central bank is that such an institution, organized into, and made a part of, our national banking system, is needed to complete the latter, and all the more needed if important new powers as to currency issues are to be conferred upon the individual banks. The defects and weakness of the national system to-day are due to the isolation of, and lack of cohesion among, the great number of scattered units. The recent crisis has furnished ample demonstration of this. As a rule throughout the interior the banks had their usual supply of currency, but they restricted payments of cash, to the serious injury of business, not so much from fear that money would be hoarded by the public,

as from fear that it would not find its way back to the identical banks that paid it freely. For example, a bank which had the account of a railroad company might decline to supply money for its pay-rolls, because the large sum thus taken from it would be scattered along a thousand miles of line, and although it might replenish the reserves of other banks, there was no probability that any would come back to the original source. In like manner the absence of leadership and of common policy in the granting of credits resulted in a more precipitous contraction of these than was necessary. If contraction and liquidation are to be the order of things, everybody understands that there are certain advantages in being among the first to act, and so a crisis is accentuated by a disorganized scramble to force collections just when the interests of the country require judicious liberality in the matter of credits. If our banking system had at its head a strong institution, conservatively managed, and able to support any critical situation, it would practically make the policy of the whole system at such a time, for the individual banks would not feel that they stood isolated and alone and compelled to think only of self-preservation.

One result of the great number of small banks is that banking is not a trained profession, although it deserves to be. The bankers of the United States are a capable body of business men, but they have generally drifted into banking from some other occupation, without education in what is entitled to be regarded as a science—the science of the exchanges. No better proof of this is needed than the fact that so many of them see no reason why the notes of one bank should not be good in the reserves of another. This fact, that so large a proportion of the bankers of the country, although good judges of credits in their localities, and practically successful in the ordinary routine of their business, are not familiar with some of the fundamental principles of finance to which the country as a whole must conform, is a substantial reason why the national banking system should be surmounted by a supervisory institution. It is true that we already have a system of supervision through a public official, the Comptroller of the Currency, and there is no intention here of criticizing the administration of that office, which has usually been very good and is ably conducted at the present time. The Comptroller's supervision is largely exercised through his force of examiners, and the personnel of this force and

the character of its work have been constantly improving as political considerations have lost influence in the making of appointments. Nevertheless, there is inevitably a degree of formality and rigidity about such official supervision. The clearing-house associations of the larger cities have found it advantageous to establish their own system of examinations, and it is apparent that a central bank, which was a part of the system, and to which the individual banks were in the habit of applying for accommodations, would be able, through its examiners and by the information constantly coming to it through many channels, in the practical touch of business relations, to exercise a most efficacious and wholesome influence. This supervision would be particularly desirable if the note-issuing powers of the individual banks were to be enlarged. The central bank with its branches would then serve as the redemption agency through which the notes of the individual banks would be cleared or redeemed and through which the most active, effective and practical supervision of the note circulation would be maintained.

One of the features in which our banking system compares unfavorably with those of foreign countries is in the control of the interest rate. The natural and proper corrective of a tendency to over-expansion is a rising interest rate. It exercises a repressive influence, the pressure gradually increasing as the demand for credit enlarges, until the rate becomes high enough to curtail expansion. Some borrowers who want accomodations at five per cent will reduce their requirements when the rate reaches six, and some who will see a profit in using money at six, will drop out when the rate reaches seven. It is better to stop a runaway horse by heading him up a hill than by running him into a stone wall. In the one case he will get discouraged and slow down, while in the other there will be a smash-up. Under the competitive conditions which govern the banking business in the United States, the banks are accustomed to lend money to their depositors at practically uniform rates as long as they can make loans at all, and then abruptly shut down entirely. This is the smash-up policy. With a gradually rising rate the business man will hold in check any inclination to enlarge his liabilities and make an effort to reduce them, and he will have time to do so. There is an enormous difference to him between being obliged to pay high rates and not being able to get accommodations at all. By this policy the climax

of a boom period is rounded over, expansion checked and contraction brought about without the shock which is unavoidable where credit is supplied freely at a uniform rate until there is no loaning power left to be used. The uniform rate in this country is due to the competition of the banks for favor with depositors, and it is useless to expect any other policy to be followed unless a strong central bank becomes an important factor in the money market. Such an institution would have reserve powers for making loans after the individual banks were exhausted and when its aid was called for it would have control of the rate.

The foreign state banks are able to exert an important influence upon the movement of gold by means of the interest rate, an advance of the rate furnishing an inducement for the payment of gold upon obligations due the bank, and a reduction serving to relax its hold upon the metal. But even beyond this aid, in time of crisis the credit notes of a central bank may be allowed to flow out and take the place of gold in circulation, where the outgo of the latter is imperatively required, thus saving the industries of the country from shock. The Bank of France parts with important sums of gold for the relief of other countries without reducing the amount of its own notes in circulation, and hence without direct influence upon trade in France. Indirectly it protects and benefits conditions at home by helping to avert trouble in neighboring countries with which France is intimately related. In this country we lack the machinery for thus controlling the movement of gold or protecting our industries from injury when the basis of our system of credits is disturbed by conditions elsewhere.

The system of independent banks without a central organization is costly to the country in requiring an unnecessarily large gold reserve. In this respect the United States makes an especially poor showing of efficiency compared with Great Britain and a poor showing even when compared with the continental countries. The gold reserve of England is practically all in the Bank of England, and at the present writing is about $165,000,000. This is the capital by means of which the gold standard is maintained, and upon which the credits of the country rest, as other banks use Bank of England notes for their reserves. In the United States we have about $900,000,000 of gold in the treasury and some $250,000,000 or $300,000,000 in the banks. If this vast store of gold made

credits in this country more stable and secure than in England, there might be a valid argument for it, but our system has practically broken down twice in the last fifteen years, while a general suspension of cash payments in England is unknown. This gold reserve is a part of the country's capital, and the interest on it is a part of the cost of doing business in this country as truly as are our transportation charges. If the latter were higher than in foreign countries there would be great agitation about it. An examination of the situation in every other country will show that a central bank can be made to conserve and protect the gold reserves of a country and accomplish an important economy in this respect.

There is strong support for the central bank as a medium for the issue of an elastic currency in the experience and conclusions of foreign countries. One by one all of the other important countries of the world have adopted it. Even Switzerland, which had been served by twenty-six well-managed banks of issue, and where regulation by reason of the small area over which they were located, would seem to have been comparatively simple, in 1905 established a central bank to take over the function of issue. By centralizing the issues in one strong establishment, which in its organization is made a semi-official institution, this important function is performed not only immediately under the eye and with the participation of the government, but with complete publicity and subject to the criticism of the entire financial world. The weekly statements of the great state banks of foreign countries are scrutinized by the press and by economists, bankers, and critics of the whole world. Manifestly these conditions are radically different from those surrounding note issues by thousands of individual and unrelated banks scattered over such a country as the United States.

The central bank could amply meet the needs of every part of the country by rediscounting the bills receivable of local banks or loaning upon such collateral. The notes issued in making these loans would have behind them, first, the original borrowers; second, the endorsement of the local bank, and third, the responsibility of the central institution. The latter should have authority to examine local banks applying for loans, and by so doing would serve as an additional supervising authority over them and exert

a most salutary influence upon the whole banking situation. When fully organized the bank should have a dozen or so offices located in the more important cities of the different parts of the country, in order to be convenient of access for the local banks of all sections. Instead of being adapted only for times of panic, like most of the plans now offered, this system of note issues would be useful at all times and serve to equalize interest rates over the different seasons of the year, and to some extent over the different sections of the country. The notes of the central bank should gradually become an important part of the common circulating medium of the country, eventually taking the place of the present national bank circulation as the public debt is retired and increasing in volume with the growth of the country. They would be a more economical medium of exchange for the country than gold or gold certificates. They would not, like a recognized emergency currency, be in themselves a sign and symptom of financial trouble. As soon as country bankers were accustomed to the regular practice of rediscounting currency bills receivable and it became recognized as a perfectly legitimate method of aiding local customers, instead of being regarded as discreditable, the central institution would prove itself to be of great service to every part of the country, and particularly to those sections which produce the great agricultural staples but lack the free capital to handle them every year. They can furnish unquestionable security and the central bank could supply all the currency needed.

Let it be supposed that the capital of the central organization was fixed at $100,000,000. That would be only about 11 per cent of the capital of the banks in the national system, and of course the amount for them to raise would be much reduced if state banks were permitted to become shareholders. This capital might be invested in high-class bonds, as in the case of the Bank of France, thus serving simply as a guaranty fund. The central organization might then issue its notes for say $300,000,000, and through its constituent institutions exchange these for gold or gold certificates, thus establishing its gold reserve. If, now, it was authorized to issue notes upon the single condition that it should always keep a reserve equal to $33^1/_3$ per cent of the amount outstanding, it would have the capacity to put out $600,000,000 of uncovered notes. This would be the measure of elasticity obtainable upon a reserve of

$300,000,000. It might take some time to acquire that reserve, but as the stock of gold in the country increased, and as the central institution became in fact the recognized custodian of the country's reserves, it would become greater. A part of this note-issuing capacity could be in current use. In time it might acquire almost a monopoly of certain classes of commercial paper, notably that based upon staple commodities and secured by public warehouse receipts. It is in the annual movement of this class of commodities that the greatest fluctuations in the demand for money occurs, and the greatest need for elasticity is felt. The central institution could finance the movement for local banks without any disturbance to the money markets, and upon terms that would effect a saving to the producers. When the crop movement was over, and the loans based on the moving product were paid, the bank would be back to a liquidated condition and ready to expand again as its assistance was needed. With its power of note issue it would be able to liquidate any of its constituent institutions that required help. The method by which clearing-house certificates and checks were issued during the late crisis affords a complete illustration of the operations of such a system.

The usual objections to a central bank can be met in the organization. The opposing arguments in this country are usually based upon the experience of the old Bank of the United States and the political controversy which developed it. That bank was under strictly private management, entered into active competition with all state and private banks, and as the latter held no relation to it but that of competitors, it was not strange that opposition was fostered. Clearly, another central bank, if established, should be organized into the national banking system and be a part of it. The capital should be furnished by the individual banks and it should do business only with them. The stockholders should be represented in the management by a board of directors elected by territorial districts. By this system every section of the country would be represented on the board and likewise all shades of political opinion. The government should be represented in the control of the bank by the principal officers of the Treasury Department. The plan of the Bank of Germany where there are two boards, one chosen by the stockholders and one appointed by the government, has worked satisfactorily there. The combination of government authority with the

practical advantages that inhere in private ownership and management is thus secured. With such an organization, and the publicity that is necessarily given to the conduct of such an institution, the probability that it will be used to promote private or partisan interests is too remote to be seriously considered. The executive officers should be elected by the stockholders' board, but subject to approval by the government directors. The experience elsewhere is that trained bankers of known ability and the highest character are chosen.

Finally, all other plans for reforming our monetary system leave the relations of the United States Treasury to the money market precisely what they have been, and this furnishes one of the strongest reasons for preferring the central bank plan. In all other countries the receipts and disbursements of the treasury are handled by these institutions. The revenues go directly into the bank, the payments are checked out of it, and whatever surplus there may be remains in the bank, like any individual or corporate balance, subject to commercial use. With our independent treasury any surplus of revenues over expenditures remains in the vaults of the treasury until the Secretary volunteers, in his discretion, to deposit it in such national banks as he may select. During the fiscal year ended June 30, 1907, the government's revenue exceeded disbursements by the enormous sum of $87,000,000, and in order that this drain might not paralyze industry throughout the country, it was necessary for the Secretary to make deposits in this amount. The transactions of the treasury are increasing every year with the growth of the country, and the discrepancy between receipts and disbursements may reach very large figures. It is important that these sums be kept in circulation, but highly desirable that they be handled and distributed by an automatic system instead of by the voluntary and arbitrary action of the Secretary of the Treasury. The determination of when deposits shall be made, and in what cities and banks they shall be made, inevitably involves that official in the most unpleasant kind of criticism, and he should be relieved from it entirely by the adoption of a different system. At this writing the treasury deposits amount to about $250,000,000, scattered in 1,250 banks. During the last two months of 1907 the declining revenue receipts made it necessary for the treasury to replenish the working balances in its offices, but with financial conditions in a state of intense strain

it was impracticable to draw on the deposits and an issue of certificates of indebtedness was forced.

When all considerations are brought into the account it is found that a central bank answers the demands more completely than any other plan proposed. It is comprehensive and final, while other plans are incomplete and temporary. It is in harmony with the development of the times toward higher organization, and it has the advantage of being a working success elsewhere.

A CENTRAL BANK AS A MENACE TO LIBERTY

By George H. Earle, Jr.,
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The solution of the problem of a central bank, with power to control the currency of the United States, to be at all adequate, must depend upon and be controlled by ultimate political principles. The same principle that underlies the never-ending conflict between the advocates of a strong centralized government and what are called "states rights," governs this question. Taught in the school of experience and adversity, the early English and American patriots learned the salutary lesson that the development of peoples, as well as their happiness, depended more upon liberty—that is, the power to control and govern themselves, rather than to be controlled or governed by anybody else—than upon any other single thing; and they, therefore, in drafting our Constitution, always viewed government as an evil made necessary by the weakness and defects of human nature, and never extended it beyond that necessity.

Under the plan of freedom, of self-reliance, self-dependence, self-government, we have become the greatest, the happiest, the most powerful people of the world; but notwithstanding these proofs to justify the work of the Fathers, we have more and more concluded that we could have done a great deal better. We are rapidly tending in the opposite direction, which must inevitably destroy liberty by vesting all discretion in some form of central government, rather than in the people as individual, independent entities.

Starting with the theory that government but existed because of the defects of mankind, and was but an evil wherever it exceeded the necessity of restraining evil human tendencies, we have now reached the higher light wherein we produce schemes of regulating everything, until liberty is but a name, and we govern ourselves by theories entirely independent of the characteristics of the people to whom our systems are to apply. It is difficult to find any one, nowadays, who has not some "counsel of perfection," and founded

on it, some theory of government that would work perfectly with a perfect race, in whom neither self-interest nor passion existed and that, consequently, did not need any government at all.

Among the radical reformers, the Nihilists are much more logical than the Socialists because neither system would work with human nature as it is, and no system would be required with society so constituted as to make their theories practicable. But the strangest development of modern times is that, concurrently with the wildest theories against restraint, popular opinion is forcing more and more restraint upon individual freedom of choice, that is liberty, year by year; until business and everything else is being stifled by the almost incomprehensible mass of liberty-restraining laws and regulations. I suppose to-day the American people imagine they are a free people; but in the sense that they were free in the days of such lesser lights as Washington and Franklin and Jefferson and Hamilton—that is, free to work out their individual independence and salvation, unrestrained by any unnecessary laws—they are veritable slaves. Under the leadership of the wonderful statesmen of our age who, not confined to either party, have a legislative panacea for everything and are making us happy by passing statutes binding us hand and foot on one subject after another, all the while increasing public officials and public burdens to enforce them, real liberty—liberty in the sense that each man must, to the greatest possible extent, be given free discretion to work out his own salvation—is rapidly ceasing to exist.

But, it may be asked, what has all this to do with a central bank? My answer is, everything. For this country to be great, happy and prosperous, it must be really free; and freedom, just as justice, consists in distributing power and opportunity as equally as possible, and as much controlled by everybody's individual, untrammeled discretion as the nature of things will permit. I am as much opposed to undue centralization as I am to Socialism or Nihilism, and for an identical reason: They are all enemies of liberty; and it is only through liberty that mankind can reach the highest forms of development.

Now, what effect will the central bank idea have upon these principles which I have thus, I fear crudely, stated? If it will tend to an equalization of power and opportunity, if it will tend

to placing, as near as may be, equal powers and equal restraints upon everybody, it is consistent with the spirit of our institutions and the purpose of our civilization; and if not, being against them, it *must* prove injurious. There is not the slighest doubt that the placing of the power, in the hands of a single man or a small body of men, to issue at his or their uncontrolled will the currency needed for trade, would prove, at least for awhile, an effective measure. I doubt whether it would permanently prove so, because all history has shown that, in the result, the placing of too much power anywhere, in its rotting-out effect upon peoples, has decreased efficiency. There is no more doubt that the creations of dictatorial powers, for short periods, in such times, for instance, as those of Cincinnatus, were effective measures, than that they were enormously and even to the point of destruction, inefficient as a permanent system, under the Emperors. Where a single man can temporarily wield the effective powers of millions of men developed by freedom, he is nearly irresistible; but the continuance of that power, by destroying the value of the units, brings down the totality of strength, even to the point of extinction.

And so, if we had a central bank, with the power of practically fixing the price of every commodity in the United States, of aggregating to itself, or those who exercised its powers, just such proportion of the production of wealth of the Union as they saw fit; it would, in a little while, tend to a selfish use that could be neither effective nor beneficial; and, like all other forms of inordinate and unequal power, it must become destructive of any republican form of government. Procuring efficiency, not through evolution and development, but tyranny and inequality, is a means that all human experience has demonstrated to be fallacious.

In my own judgment, our currency, like our other evils, is to be remedied by greater freedom and greater distribution of choice and discretion, rather than by a greater centralization or unequal distribution of power. It is a fair question to ask, therefore, whether conceding, as I do, that there is not sufficient elasticity of the currency, I can suggest no remedy, but would prefer present evils to those resulting from the creation of too centralized a power; and the answer, to my mind, is obvious. The true remedy must be found, not in placing our dependence upon the discretion

of any one, but of every one,—that is, again, upon liberty, rather than upon power and restraint.

We have a very satisfactory system of regulating the investments of saving funds, that demonstrates that a line of investment can be easily named in advance by statute that would be a safe basis for currency, as well as for investments, as at present. In my judgment, therefore, starting with government bonds, which should always be given a great advantage in currency issues, as that strengthens the credit of the Union, a list could be made upon which any bank—and, again, the banking laws should be equally open to all—could issue its notes. A system of taxation on such issues should be so regulated as to make inordinate inflation impossible; but there should be no limit to the amount of circulation when the tax had reached a point where it must become unprofitable to the banks that take out that circulation, for then they would only take it out to save the commercial community and their customers, and for no dangerous purposes. And this currency so available should be available at the discretion of *everyone,* without the necessity of consulting any government official or any government bank. I do not want to be misunderstood. The restrictions as to security should be full and ample, the taxation large *and on an ascending scale.* The currency should be made absolutely safe—as safe as it is now—and the tax collected with such a system, if that tax were properly applied, would not only be sufficient to guard every holder of a note against loss, but would yield large revenues beyond this to the government in relief of general taxation. With such a system worked out in detail, governmental power would not be increased, the danger of depriving the people of any part of their self-developing discretions would not be incurred.

This, as I have said, is all very crudely stated by a man who has no opportunity to work out details or polish sentences; but it recommends itself to me, because my whole study of the constitutional history of our peoples has convinced me that liberty is the greatest friend of mankind, just as inordinate powers are the greatest danger. We shall go higher and better and further, following out, in all our troubles, a liberty as wide as human defects will permit, than hunting around for benevolent despots in any form, for I do not believe that even benevolent despots ever do real good, because, however well they may govern, the injury to

communities inflicted by taking from them the educational benefits of self-government is incalculable.

Both religion and science teach us that human advance is but to be gained through the slower methods of development of character—the one calling it "regeneration," the other "evolution" or "survival of the fittest," or what you will. Even in politics and by politicians these principles are at times heeded—even now we are daily told that the policy of the government is to educate the Filipinos to a fitness for self-government, by gradually entrusting them with widening discretions, increased liberty, as this increasing liberty fits them for more. This is true political science—*the only way*—these men are unquestionably Filipino patriots, but what we need is American patriots—men who will "make way for liberty" here as well as there; who will disregard popularity, if need be, that they may abide with duty; and not piecemeal exchange our birthright of freedom for a mass of legislation and restraint only really effective for evil. Many, many injurious steps have already been taken toward the inequality and slavery of over-government and benumbing restriction. But all of them will be but a drop in the bucket, compared with the dangers of placing in the hands of the few the entire discretion as to the volume of the people's money.

In an ultimate analysis, our country is only languishing for liberty and equality; and I do not hesitate to predict an instant return of prosperity, at the first moment that honest men can make investments and conduct important affairs, without the necessity of having a lawyer at their elbows, who, indeed, in most cases, refuses the responsibility of advising what all the accumulating mass of restrictive legislation means. We have evils enough in this direction, without restraining the people's right to determine when or to what extent their interests require a further supply of currency on a sound basis. If we really need all the present restrictive mass of regulative legislation, we are, like the Filipinos, already unfit for freedom; and if, as I believe, we do not, by taking away our personal right of choice, of initiative, we are being educated as rapidly as possible, to be like them, unfit for self-government.

If these hasty suggestions should chance to reach the eye of someone with a faculty for leadership, and a love of his country, and invite him to battle again for freedom, to expose the shams

under which the people are losing their freedom, under the pretense that their enemies are being punished, I can promise him the ultimate approval of his countrymen. For that, in the end and permanently, only comes to real patriots, those that unite instead of divide, those that love instead of hate; those that, putting aside "malice, envy and all uncharitableness," understand the potency of "good will to men," while never forgetting that "eternal vigilance is the price of liberty."

CLEARING-HOUSE CERTIFICATES AND THE NEED FOR A CENTRAL BANK

By William A. Nash,
President Corn Exchange State Bank, New York.

It is universally conceded that the present time is highly favorable for financial reforms. The great danger is that the remedies will be so numerous, and the diagnoses so different that the patient will linger and suffer. The doctors will assemble and discuss, but, I hope, to use an old story, we shall not have to wait for the autopsy to find out what is the matter. The brief contribution that I shall make towards the solution of the riddle of American finance is based on my life as a banker in the City of New York, and what I have learned in my relations with the New York Clearing House.

When I read the numberless projects for our financial well being that fill the newspapers, our book shelves, and the Congressional Record, I ask myself on what do these men base their plans, on observation or actual contact and familiarity with the subject they talk about, and I must conclude that much of it is spun out of their inner consciences. The best known of our Revolutionary orators said, "I have but one lamp by which my feet are guided, and that lamp is experience," and I propose to use experience in the space at my disposal.

When I was a youth I saw the panic of 1857. The failure of the Ohio Life and Trust Company created a general distrust of banks all over the country. It began as always in New York. Good and bad banks alike were attacked by uneasy depositors and they were fought to a standstill and compelled to surrender. The situation, however, soon righted itself because the depositor had no safe place to keep his gold and soon returned it to the bank he had been distrusting. We had not at that time that ingenious device known as the safe deposit vault by which banks and trust companies now connive at their own decimation.

The Civil War was marked by no less than four banking and currency crises, in 1860 and 1861 when the war broke out, and in 1863 and 1864 when the unwonted demand by the government

and the creation of a new currency, threw the machine out of gear. To remedy these derangements the most useful and effective device ever known in our finances was created. I mean the loan certificate of the New York Clearing House. It was invoked four times during the war. In 1860 we issued $7,357,000; in 1861, $22,585,000; in 1863, $11,471,000 and in 1864, $17,725,000; in all about $58,000,000, which was an immense sum for those days. These certificates played an important part in the war for the Union. While the banks and the people were subscribing for bonds with an uncalculating patriotism, the clearing house stepped in with the loan certificate and steadied the business situation by enlarging credit and preventing the panics that always follow excesses of any kind in the commercial world. The effect of the loan certificate is instantaneous. Credit is expanded upon the soundest basis known to experienced financiers and the sufficiency of that basis and the volume of the supply is regulated by bankers and men of business whose character and antecedents are the strongest guarantees of the honest and wise administration of the trust.

You are all familiar with the basis of the loan certificate, yet a short re-statement may not be amiss. Every bank in the clearing house has the privilege of coming to the loan committee with its bonds, loans and commercial paper and obtaining seventy-five per cent of their value in loan certificates of all denominations with which they can pay their debts to each other. They naturally bring their very best assets, so that in our experience in New York not a single dollar of loss has ever followed our many issues. Again, quite naturally, the banks are desirous of getting back their gilt-edged assets, and the process of redemption and retirement begins almost as soon as that of issue. The practical part of this expansion is very interesting. The loan committee can issue many millions in a single morning. There is no necessity of waiting for a slow press to print the circulation. We, in New York, make them in denominations of $5,000, $10,000, $20,000, $50,000 and $100,000. We have not yet come to $5 and $10, but the present crisis has shown the need and desirability of such small notes.

After the war there ensued a season of speculation and development, stimulated and fostered by the currency created for the needs of the government and the people during the rebellion.

This lasted till 1873, when the inevitable reaction came, resulting in that famous panic. Here the clearing house hesitated a day or two before issuing certificates, and a hesitation even of that time is a very serious matter. When a house is on fire you do not want to walk your horses before the engine. In 1873 we issued $22,400,000, and the time between their first issue and their final retirement was about four months. Then for eleven years there was no occasion for their use, until the Marine and Metropolitan Bank panic in 1884, when about $25,000,000 were put out and again four months was the limit of their existence.

In 1890 we felt the effects of the Baring panic and issued sixteen millions, and in three months they were all retired. You remember that in England in the Baring panic the joint-stock banks, under the guidance of the Bank of England, substantially adopted our loan-certificate system for their own relief. In 1893 the certificate performed its most useful and brilliant service. We had a crisis of great and varying elements. The silver question and the end of a long period of commercial extravagances conspired to produce an emergency that none of us will ever forget. The New York Clearing House acted with superb energy and promptness. We issued more than ever before, $41,500,000 in certificates were signed. Their issue began June 21, 1893, and the last one was cancelled November 1, 1893—again a period of about four months. In 1895, when the Venezuelan message was issued, the clearing house forestalled and prevented a panic by authorizing the usual issue, but the very promptness of their action prevented the use of any of them by the banks.

Now we are in 1907, and the same agency is at work, and you all realize how effective it has been to still the waters, so we can shift the cargo and repair the ship for its further voyage. When the history of 1907 comes to be written it will be a very interesting and instructive chapter on finance. It is very well known that there was a well meaning but injudicious attempt to handle the situation without resorting to the time-honored remedy. The clearing house delayed their issue several days out of respect to the very distinguished gentlemen who hoped to get along without their use, but finally the pressure of events left no alternative. I believe that much was lost in the few days of hesitation that preceded the actual authorization of the issue, and that

a more prompt action would have warded off some of the subsequent occurrences that we have had to deal with. Why there should have been any hesitation in using a remedy so long and so often tested I have not yet been able to discover. It has again taken its place as a great corrective and conservator—and to its use we owe the subsidence of the more active features of the panic. Excessive and alarming rates for money immediately disappeared, and the banks were able to extend credits to their customers—knowing that the source of supply was at their command.

This is the history of this great financial agent. It has been used eight times in the past half century always with relief instantaneous, without loss, and with a period of existence from the first one put in circulation to the last one retired of about four months. As an emergency currency it is incomparable—as an asset currency it is the only one that I can conceive of, that is not fraught with dangers, greatly in excess of the benefits to be derived from it. The secret of the whole matter lies in the character of the men who have managed it. I know of no more unselfish, devoted and patriotic body of men than the Clearing House Committee of New York City. It has always been so, it is so to-day. The business public have unlimited confidence in their judgment and wisdom. The clearing-house certificate is the embodiment of all these qualities and constitutes it as the most absolutely valuable of all our financial devices.

Naturally the whole country follows New York. It is not vainglory to say so—it is a fact. The clearing houses of all important and unimportant cities follow its lead. The panic is arrested—credit is assured—the dangers of extreme distress are eliminated, and the country finds time to readjust, repair and resume.

Now, in view of this practical lesson, so often repeated, and always successful, what should be done, and what do we learn. The first lesson is, that expansion of credit and the issue of currency can best be done by some central responsible power and not by a series of small powers scattered all over the country. The first process gives confidence, the second will be followed by no confidence. I do not hesitate to say that an asset currency authorized on a forty per cent or any per cent basis and intrusted to five thousand banks all over the country will surely result

in a cataclysm of disaster, unparalleled in the history of the country. On the other hand, if we organize in a permanent form the clearing-house loan certificate now issued so fitfully and at a time when a crisis is already upon us, we will provide the country in advance with a remedy, just as the New York Clearing House prevented a panic in 1895.

But how shall we get this permanent form? To answer this we come up against the most venerable and senseless prejudice that obstructs the national well being, the dread of a great central bank. This hobgoblin of the politician and the business man has walked the earth for seventy years. The panic of 1837 has not yet been forgotten although the country is radically different from that day. We must kill this bugaboo and exorcise this ghost.

The average politician is more afraid of it than any other public question except the tariff. The magnetic needle does not point more unerringly to the pole, than the clearing-house certificate points to a great central bank, and dodge this as we may, and as we probably shall, finally we will come back to it and hail it as the solution of all our difficulties. But such a bank must be organized properly or it will never gain public confidence. The government must be represented in it, but the dominant power must reside in a board of directors to which the most eminent bankers and business men shall be chosen. Let the clearing houses of the great central reserve cities nominate those directors and you will have a governing body as influential and as respected as the Supreme Court of the United States.

Give us in good faith such a central bank with such management and with such functions as the clearing houses all over the country have to-day, and you will put us on a par with England and France and Germany with their great benign national banks. To-day we are suffering for lack of such a consolidated, salient power. Our energies are scattered and inharmonious. They ought to be solidified and present an unbroken front. The clearing houses and the loan certificate point the way with an unmoving finger, and until their persistent and insistent demand is heeded and crystallized, we shall not have permanent peace in our business or financial world.

It is hardly necessary to say that political or partisan features

in such a bank will be fatal. To give it authority and respect it must be divorced from party politics. Its creation on the basis I have outlined will be a work of patriotism as signal as any we have ever performed as a people. I believe that the necessities of the hour, necessities that recur with every monetary disturbance, will dictate a sound solution, and, without doubt, this conference and others like it will be important steps to that end.

FOREIGN EXPERIENCE A GUIDE TO CURRENCY REFORM

By Isaac N. Seligman,
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As Governor Hughes has admirably stated in a recent address before the Civic Forum in New York, "The quality of the administration of local officers lies with the citizens of the community. They will be good or bad as the public insists on the former or is content with the latter." So it is with our currency problem. It lies with us whether or not we shall have a sane, practical and intelligent currency system. The great difficulty at present appears to be an overzealousness on the part of everyone to offer some panacea for the present unsatisfactory monetary condition. That the present crisis is not wholly due to our perverted and immobile monetary system is possibly true, at the present time the crisis might in a great measure have been mitigated if we had got our own house in order. Until we have a stable and elastic currency system we will be constantly subjected from time to time to the present acute and humiliating financial conditions like those which now confront us. Fortunately the present crisis has fully opened the eyes of the entire country to the importance of some currency legislation, and has convinced the people—not Wall Street, but the West and South as well—that some method must be found to prevent a recurrence of the present acute and distressing crisis and depression. Our national banking system worked fairly well during the war period, but the panics of '73, '90 and '93 have awakened us from our dream, and have brought home to us sharply the need of some elastic and responsive currency system.

Congress has not been able to enact as yet any permanent plan of relief, and this has been chiefly due to two causes, first, the fact that our legislators have not as yet given sufficient time and thought to an intelligent, scientific and responsive currency plan, and second, their inability to unite on any definite plan. The country now imperatively demands some intelligent relief.

We have had numerous tentative schemes offered; the Balti-

more plan, '97, the Carlisle and Fowler bills, the McCleary and Gage bills, the Monetary Commission Indianapolis Convention, '98 plan, and later the New York Chamber of Commerce and American Banking Association plan, '06. All these plans practically provide for asset currency, *i. e.*, the right to issue emergency currency based on a certain proportion of their bond-secured circulation, having first lien on the assets of the bank, subject to a tax to provide for any possible losses. The weakness of these last two plans has always appeared to lie in the fact that the graduated rate of interest paid is not sufficiently high to insure the rapid redemption in normal times, and also not sufficiently high tax rate to prevent the issue of notes in instances of urgent requirements. It is likely that some measure of relief would have been afforded to the country if any one of these plans had been in operation during our present crisis; at the same time it would serve only as a palliative and not as a cure.

There is truth in the statement of Lord Rothschild when he characterized this country as financially uncivilized in its banking methods.

M. Siegfried, Senator of France, my valued friend and an expert on financial questions, has only lately stated that the French may be reproached with a lack of the spirit of commercial enterprise which characterizes the Anglo-Saxon, but it must be recognized that in financial science they can give lessons to America which can profitably be guided by the counsels of eminent French financiers and bankers. Gentlemen, this is true and we may candidly make the confession.

The spectacle presented to-day by our currency to the civilized banking community of the world is simply shameful.

Emergency clearing-house certificates have been issued in nearly all large cities; cashiers' checks and scrips have been circulated to take the place of currency, and all devices imposed on the community to take the place of currency which has been hoarded. The United States Government in the person of Secretary Cortelyou has come to our assistance in the present juncture and has helped the situation by depositing nearly all treasury funds in the banks, and has also devised other measures of relief to prevent an actual cessation of business. He has ably fulfilled the task.

These measures only accentuate more pointedly that in order

to obviate such temporary provisions for relief measures some permanent, logical and intelligent plan must be thought out.

When confidence is shaken it is inevitable that the community will tend to hoard gold and currency. Such conditions are substantially unknown abroad. Crises and panics are of course possible everywhere; no monetary system can be devised to prevent a panic; but an intelligent and elastic banking system can always be relied on to keep off widespread disaster. It is true, gentlemen, that it is difficult to induce a community to depart from its old traditions, but the time has now come when we should be guided by such foreign systems as have been working satisfactorily for centuries, and which, in times of panics and stress, have fully met all expectations and conditions. I refer to some central banking system.

This is the system existing in France, England, Germany and in all European countries. It is needless to dwell on the methods and machinery of the central banks in European countries. Although not *owned* by their respective governments they are practically controlled in a moral sense as the government is represented in its board of directors and the governmental policy substantially rules. Flexibility and safety are the two essentials in currency problems, and the former is absolutely wanting in our present system.

The fact that the government bank was used by President Jackson for political purposes should not close our eyes to the importance of now re-establishing such a bank purged of many of its then evil features, and surrounded by reasonable safeguards and legislation. I do not propose to enter into any details as to the plan of a central bank and only give an outline. This central or government bank should be owned jointly by the government and the national banks. The Secretary of the Treasury and the Controller of the Currency should be represented on its board. The treasury funds should be deposited with the central bank, and the government bank should have power to issue notes in certain proportion to its gold reserve or capital. As it is likely that the sole right of such note issue would be opposed by our national banks, and any radical plan for a government bank would probably not pass Congress at present, an alternative plan has been admirably developed in an article lately published by Mr. Paul M. War-

burg, a banker in New York, under the title, "Plan of a Modified Central Bank." This appears to me the most practical of all plans yet suggested, as it provides for a government bank limited chiefly to transactions with the clearing houses of the various cities. The bank is to deposit funds with clearing houses and national banks against United States bonds and other approved security as well as commercial paper and bankers' bills with proper margins. The plan has the great advantage of providing additional currency, and the rate of interest to be fixed by the board and the banks would have been able to rediscount their paper and to obtain bank-notes to relieve the currency strain. Clearing-house certificates issued in different centers in times like the present make it well nigh impossible to arrange for transfers of money from one city to the other. Just now drafts on Philadelphia, Boston and other banks sent for collection are being returned on the plea that momentarily it is impossible to remit New York exchange. Each city issuing its own clearing-house certificates under the present abnormal conditions practically builds a Chinese wall against other centers.

There is no doubt in my mind that if we had a modified central banking system the forced closing of the Knickerbocker Trust Company could have been avoided as it could readily have hypothecated on the first day of its run 25,000,000 or more of its good securities with the central bank, and the heedless run on other trust companies would have been prevented.

At the time of the failure of the Leipziger Bank in Germany (an institution which had been grossly mismanaged by its directors, many of whom, by the bye, are now serving states prison sentences) there was a run on one of the largest banks in Germany. This bank turned over some 75,000,000 Rmx. of discount, *i. e.*, commercial and bankers' endorsed three and six months' bills, to the Reichsbank, which in turn, furnished the funds and the run ceased at once.

The Bank of France has been shipping gold to England, taking in payment finance bills, and it is prepared to ship us gold against commercial bills, thus proving what substantial aid can be rendered by a central or government bank to other countries. What better proof is needed of the value of central or government banks in such emergencies. It is needless for me to dwell longer on

the importance of some such central bank, and I refer you to a careful study of Mr. Warburg's article which has been published in pamphlet form.

I realize that it is no easy task to educate our representatives in Washington to a radical change in our currency system, and any hasty action in providing a remedy which, to our lawyers and statesmen, may seem to be complicated and technical in its machinery will likely end in defeat. I fully realize that there are many well-intentioned citizens who are honestly opposed to any extension of credit-issuing powers by our national government. The country must now realize, however, that some currency measures must be enacted by Congress to mitigate the present evils. The emergency currency plan proposed by the New York Chamber of Commerce and modified by the Bankers' Association has been under discussion for a year. As already pointed out such a plan advocated by many students and business men has been strongly opposed by many thoughtful, practical financiers. Has the thought ever occurred to you, gentlemen, what would have been our present situation if this plan had gone into effect, and if all of the additional emergency circulation provided for by such plan had been issued during the summer months when money was stringent? Would we have been much better off now, and would we not be again appealing to Secretary Cortelyou for help?

I am pleased to note that Mr. Ridgely, the Controller of Currency, has just strongly declared that a large central bank of issue is the proper solution of this problem. Let us do our utmost to study it from an unbiased standpoint, and let us give our support to such plan as will give us permanent relief and place our currency system on a par with those of all civilized nations. Congress will shortly convene and many currency plans and bills will be introduced. It is the duty of every citizen to have the courage of his convictions, and not to temporize with the problem, and to bring pressure to bear on his representatives in Washington in order that an intelligent, rational and comprehensive currency bill shall be enacted. As our noble President, Abraham Lincoln, has said, "Let us dare to do our duty as we understand it." We will confer thereby a lasting blessing on our country.

RELATION OF A CENTRAL BANK TO THE ELASTICITY OF THE CURRENCY

By Jacob H. Schiff,
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The storm which has recently broken loose has not yet entirely subsided. The causes of the financial trouble which has come upon us are hardly understood yet, but with typical American courage, we are looking already for the remedies, not only to retrieve what has been lost, but also in the desire to gain protection for the future against the recurrence of a disaster similar to that which has overtaken us.

The physician who would want to find proper remedies must first know and understand the origin and seat of disease. We should therefore, carefully inquire into the causes of this crisis, which has come upon us almost in the midst of an era of unprecedented prosperity.

To me it appears the answer is not surrounded by much doubt. The origin of the crisis is to be sought mainly in too great an expansion of enterprise of every nature, both corporate and individual. This, as a consequence, caused a straining of financial requirements, and particularly of credit, beyond legitimate limits. "Prosperity run riot," expresses perhaps best the condition, which existed and which brought us to our present plight. Nothing is probably more largely responsible for the breakdown, than the obstinacy with which new enterprise was fostered; in the enormous volume of business which was developed in every quarter, even in the face of a steadily increasing money scarcity, and, further, in the stubbornness with which it was insisted that the country was so prosperous and rich that particular caution and prudence were not needed, the march forward was made with a totally unprotected rear.

Look only at the number of so-called trust companies, called into being during recent years, which under a false flag bid for and attracted millions upon millions of deposits, to be used not for legitimate banking, but for illegitimate promotion, from which

funds could not be withdrawn when their return was asked for by those to whom they belonged. And not alone in financial quarters had developed this prosperity madness—in industry and commerce, prudence had likewise been thrown to the winds. The manufacturer or merchant, when warned that he was expanding too rapidly—that he was straining his credit in too great an extreme—scornfully rejected the advice to go at a slower pace. His answer almost invariably was that the demand for his goods was great; that his customers were in good condition, and that anxiety and complications existed only in Wall Street. He overlooked the fact that the basis of the large volume of business, which he thought he was doing legitimately, rested, to a great extent, upon the very over-expansion of enterprise represented by the inflation of corporate securities he was criticising, and that the collapse in security-values would have inevitably to be followed by a breakdown of the general business of the country.

And now, as a panacea for the ills under which we are suffering, a sudden demand has sprung up throughout the country for currency reform. Proposed by the few who foresaw and foretold what was coming, as a partially protective measure, the warning to reform the currency was, when it was sounded, decried as a scheme of banks and bankers for selfish purposes, and became almost lost, like a cry in the wilderness. Had it been heeded, the present crisis might not have been entirely prevented, but it would never have gone so far in upsetting the business of the entire country. Let it be said, however, and well understood, at this juncture, that currency reform, imperatively needed though it is, can in itself never furnish protection against the consequences of unsound and illegitimate business methods. A properly constituted circulating medium, can furnish in times of financial difficulty a palliative, but without simultaneous reform in the unsound practices, which, to so considerable an extent, have governed the affairs of financial institutions, currency reform will be of little avail.

The Governor of the State of New York, with statesmanlike sagacity, has just taken action with a view to correct the shortcomings, which have been laid bare. A commission has been authorized which is to report upon a revision of the banking laws of the state, action such as this should be particularly welcomed.

I shall not enter here into a discussion of any particular scheme

for the reform of the currency, to that I have already furnished my quota upon earlier occasions. So much has already been said, written and published upon the question of currency reform, so many propositions have been made by all sorts and conditions of men as to methods, ways and means, through which is to be secured what is needed, that with the meeting of Congress just upon us, it had perhaps now best be left to the wisdom of our national legislators to embody some measure into the form of law, which to them shall appear to best satisfy the demands and needs of all sections of the country. Congress will, in any event, have at its disposal rather a long catalogue of currency reform plans to select from.

What we are most in need of at this juncture, is the enactment of a measure, through which the circulating medium can be made to respond promptly to a *diminished* money demand. We have, during recent years, with the enormous expansion in enterprise and general business, no less than in the few weeks since this crisis has come upon us, been rather liberal in the creation of paper currency. If we are not careful, we shall before long find ourselves face to face with so large a volume of paper money, that gold will inevitably be driven out. Otherwise, some day, when this mass of paper can no longer be digested, we may be face to face with a depreciation in the standard of credit of the government, as expressed by the market value of United States bonds.

Expansion of the currency, when legitimately needed, will, under proper provision for this, take care of itself, if only in any scheme for the reform of the currency, proper provision be first made for the promptest possible contraction of the circulating medium, when its volume becomes too large for legitimate requirements. Nor is it likely that any scheme for the issuance of a circulating medium will prove permanently satisfactory, which shall clothe 6,000 banks with the privilege of issuing credit currency, each for itself. No matter how completely the safeguards proposed to be established through the creation of a guarantee fund may appear to be thrown around the exercise of this privilege, a single default, even if only temporary, would likely create prejudice against the entire volume of the outstanding currency, and no chances, however remote, ought to be permitted to be taken in this respect. Whether it shall be a central bank—if authority for the establishment of such

can be obtained—or a central association of national banks, to possess no other function than to issue to the banks the circulating notes, to which, under the stipulations and restrictions to be imposed by law, they shall become entitled, there is needed a central authority, to properly control and determine the issuance of any circulating medium, based upon assets. Such a controlling central authority should and can best be constituted by the banks themselves. An association of national banks would, for the time being, at least, probably prove more acceptable and practicable than a central bank. The latter, to be of real advantage, would not only have to receive a monopoly of the privilege of issuing circulating notes, but would moreover have to become the depository of the funds of the government. It would have to undertake the discounting of commercial paper, both for banks and for individuals, and it is not likely that the country is, at this time, prepared to sanction so far-reaching a scheme, which of necessity would revolutionize our entire national banking system.

The one lesson, at least, which we should learn from recent experiences, is that the issuing of clearing-house certificates in the different bank centers, while no doubt it helped locally, has also worked considerable harm. It has broken down domestic exchanges and has paralyzed to a large extent the business of the country. Far better, as has recently been semi-officially proposed, that the government itself should become authorized to issue, in times of great stress, legal-tender loan certificates through the clearing houses, to the banks, upon appropriate security, and with stringent automatically acting provision for quick redemption. Undesirable as such an expedient may be in itself, from an economic point of view, it would at least prevent a breakdown of domestic exchanges, such as we have just experienced, resulting in a large premium upon currency—or, to state it more correctly, in a large discount upon bank checks. We have seen how the suspension of cash payment by the banks in the leading centers, compelled us to throw upon Europe the burden of financing our cash requirements almost entirely during the important period of the crop movement, and forced the Bank of England into a position, so mortifying for us, where it had to assume this burden almost single-handed.

Comparisons are odious, but sometimes they are also profitable, if properly applied. Let us at least hope that the severe and costly

lessons we have received, shall not be permitted to be forgotten, until we have found appropriate remedies. It is certain, if this be done, we shall emerge from the momentous period, through which we are just passing, freed from many handicaps, which still impede us in the financial, commercial and industrial aspirations which we possess—fortunately be it said—both as a nation and as individuals.

DIAGNOSIS OF THE WORLD'S ELASTIC CURRENCY PROBLEMS

By Andrew J. Frame,
President Waukesha National Bank, Waukesha, Wisconsin.

Professor Sumner, in his "History of American Currency," said, in summing up the doctrines of the celebrated bullion report which was submitted to the House of Commons in 1810, "Its doctrines are the alphabet of modern finance. They are no longer disputable." Another section reads, "In the presence of a panic the duty of the bank is to discount freely to all solvent parties."

I take it, a smile will pass over the features of my banker friends the moment their ne'er-to-be-forgotten practical experiences of 1893 and 1907 loom up as a nightmare before them again. How can a bank discount freely to all solvent parties when its panic-stricken depositors want all the cash the bank holds, and very quickly too?

What is the meaning of the word panic? The Standard Dictionary says: "The prevalence of unreasoning and overpowering alarm in financial and commercial circles, or in both, leading to sudden and stringent restrictions of credit and great shrinkage in values, and precipitating mercantile and banking failures; often the precursor of a financial panic."

Panics undoubtedly cannot be wholly prevented except in theory by such dreamers as Bellamy, who support the impossible idea that human nature can be changed, speculation cease and optimism be eradicated from Anglo-Saxonism.

Notwithstanding this, I am a firm believer in ameliorating panic conditions, both as to their frequency and as to their severity. But how? My answer is:

(1) By studying history and profiting by the experiences of the past.

(2) By passing conservative and sound banking laws, and then enforcing them.

(3) By giving as much elasticity to the circulating medium as can be safely attained, but never to reach an amount which engenders

doubt in the public mind as to its redemption in the world's standard of value.

As to the problem of conservative and sound banking laws and enforcement, the national banking system is the safest and best this country has known. It is a well-known fact that some states have good laws, some lax laws, and others none at all. It is also a matter of gratification to know that many states are working along the line of betterment. With thirteen thousand million dollars due to not less than sixteen million depositors in the banks and trust companies of the United States, in order that conditions leading to panics and their paralyzing effects may be minimized, is it not the clear duty of our statesmen to perfect, as far as possible, conservative laws on sound lines?

These laws should demand ample capital paid in, limitations on loans to any person or firm, and reasonable reserves according to whether deposits are payable on demand or on time. As space forbids further pursuit of this phase of the subject, I will confine myself to the knotty "elasticity problem."

The Elasticity Problem

The history of the progress of nations during the earlier centuries shows an evolution from the use of bullocks as a medium of exchange, as recorded in the Bible, to the later period of barter by the use of beads, nails, skins, shells, etc. In later centuries, in addition to the limited quantities of coin, the banks have indulged more or less in the issue of so-called asset or credit currency, dubbed "coined credit," by Professor Sumner, as well as currency secured by various kinds of collateral. All makeshifts have in the most advanced and progressive nations given way to the world's standard of value—gold, until to-day those progressive nations which issue currency do so largely through one great central bank. The immense coin reserves of these great banks practically make their currency issues a gold certificate payable on demand. They are practically banks of issue and not of deposit, as will be seen by the table which follows. These banks issue more or less currency in excess of coin held, but some are based on government securities, as in England; all their loans are amply secured and of a quick liquid character. In view of these facts, these great banks, with immense capital, coin reserves and small liabilities,

are in a position to expand currency issues to move crops without distrust, and under panic conditions "to discount freely to all solvent parties," also to furnish extra cash to banks with which to meet the insane demands of frightened depositors, thus preventing general paralysis of trade and industry in all branches, which is inevitable if forced liquidation takes place which is so destructive to labor and capital alike.

I am firmly convinced that if the United States had lately had a large central bank of the banks, commensurate with our greatness, notwithstanding the colossal pyramid of credit which we have been building, we might have been let down by easy stages, instead of falling off from the top of the building, producing a jar that seems to have shaken the whole commercial world. I am also convinced that if the last Congress had authorized asset or credit currency on the American Bankers' Association plan, when the 1907 spasm struck us, our troubles would simply have doubled.

Let us briefly diagnose the reasons therefor by a comparison of European conditions with those of the United States as they exist to-day.

Capital, specie, circulation, etc., of the great European single banks of issue on or about June 30, 1906.

Table No. 1.

In Millions.

	Capital.	Circulation.	Deposits.	Total specie.	Loans.
Imperial Bank of Germany	$28.9	$412.0	$149.9	$211.1	$345.7
Bank of Austria-Hungary	41.9	376.5	31.6	299.2	189.8
National Bank of Belgium	9.6	136.5	16.3	24.1	124.8
National Bank of Bulgaria	1.8	8.6	17.0	7.6	11.9
National Bank of Denmark	6.8	34.9	.8	27.2	13.7
Bank of Spain	28.9	305.7	134.2	200.2	154.4
Bank of Finland	1.9	18.2	4.2	5.2	11.7
Bank of France	35.2	908.8	189.1	803.4	255.3
National Bank of Greece	3.9	23.1	23.4	.4	21.6
Bank of Italy	28.9	213.3	90.6	152.7	91.6
Bank of Naples	11.6	66.6	16.1	32.8	34.5
Bank of Sicily	....	14.8	10.6	9.1	10.9
Bank of Norway	3.5	21.4	1.9	8.0	12.0
Bank of Netherlands	8.0	113.0	2.5	57.1	59.8
Bank of Portugal	14.6	74.5	29.3	13.7	26.5

	Capital.	Circulation.	Deposits.	Total specie.	Loans.
National Bank of Roumania	$2.9	$43.1	....	$15.0	$25.2
Imperial Bank of Russia	28.3	591.0	$109.8	455.9	208.3
Bank of England	70.8	146.8	280.3	187.8	156.8
National Bank of Servia	1.1	6.6	.6	4.5	2.3
Royal Bank of Sweden	11.9	52.2	12.2	20.6	37.0
Total 20 banks	$340.5	$3,567.6	$1,120.4	$2,525.6	$1,793.8

The foregoing, practically banks of issue and not of deposit, show demand liabilities versus coin reserves, as compared to the national banks of issue in the United States, as follows:

In Millions.

	20 European banks.	137 U. S. Nat'l banks.
Circulation outstanding	$3,567.6	$517.9
Deposits	1,120.4	5,898.0
Total	$4,688.0	$6,415.9
Coin reserves held	2,525.0	464.4

Mark the fact that the great issuing banks of Europe hold 54 per cent of demand liabilities in coin, as against only 7 per cent in the United States.

Mark that, as records show, the total currency issues by all the other great European banks of deposit on June 30, 1906, approximated but 150 millions of dollars, and when the charters of the four German banks and those of Great Britain and Switzerland expire, the right to issue currency by all of them being doomed, there will be few left in Europe to issue currency except these twenty great centralized banks and the new bank of Switzerland.

Do not the foregoing facts conclusively show that the progressive European nations each have one great issuing bank, which might be termed the governor to the engine, expanding and contracting automatically without distrust, because they have immense coin reserves and quick assets, and that the issue of credit or any other kind of currency by small, independent banks has practically been totally abolished all over Europe?

This result in Europe was evidently brought about through the dear school of experience. Let us touch upon a few most salient instances abroad.

France

John Law, nearly 200 years ago, after being turned down by the keen Scotchmen, captured the French people with his plausible populistic inflation scheme, and history tells us that France did not recover from its terrible effects for fifty years. The statesmen of France, not content with the John Law experiment, in consequence of business depression in 1789, instead of manfully waiting for a natural return of better days, in response to the popular clamor for "more money," sought to take a short cut to prosperity by issuing heroic quack doses of fiat money for several years in succession. Just as soon as the effects of the first issues began to show symptoms of a reaction upon business, another larger dose was administered to the already staggering patient.

The statesmen of France, in most eloquent perorations—which might be likened to some in these latter days—swayed the multitude so far that the intoxication for assignats grew until nearly 40,000 millions of francs were outstanding in 1797, a sum aggregating nearly three times our whole circulating medium to-day. With one fell swoop the French nation repudiated the whole issue.

The Bank of France was organized in 1800 with about $6,000,000 capital, which at various times was increased, until to-day it is about $35,000,000. It has power to issue notes with the following prerequisites, as dictated by Napoleon: "The notes shall be covered either by coin held by the bank or by notes secured by collateral or by notes signed by three responsible persons." A strong effort was made at that time to give the right of issue to the banks generally in France, but Napoleon answered in substance,—It is easier to watch one bank of issue than it is to watch great numbers. His logic exactly condemns the American Bankers' Association plan to-day. What has been the result in France? The foregoing table shows:

	Millions.
Circulation	$908.8
Coin on hand is 88½ per cent of circulation	803.4
If we add the deposits of	189.1

to circulation outstanding, the bank still would show about 73 per cent of coin against all liabilities, as against 7 per cent for the national banks of the United States. We must not forget also that the $255.3 millions of loans are of a much more liquid character

than are those of the national banks generally throughout the United States.

The Bank of France has been managed with such consummate skill that even during the Franco-German war the depreciation of its notes was only 4 per cent. It also during the past century rendered invaluable aid by loaning coin to the Bank of England during several crises in Britain. The bank, with its vast coin reserves and quick assets has been enabled to loan freely to all solvent parties under panic conditions, thus undoubtedly preventing panics at times, and it has steadied the financial convulsions in France for a century. The Bank of France has had the sole right of issue in France since 1848. Its uncovered currency averages about 120 million dollars, which indicates no currency inflation in France as against 900 millions in the United States to-day.

England

The Bank of England was chartered in 1694. Although it was of great value to mercantile interests in several financial crises, yet as the bank had limitless authority to issue notes, and there was no rule as to coin reserves from 1694 to 1844, at which date Peel's Act "gave the Old Lady of Threadneedle Street the straight jacket she has worn ever since," Bagehot, in his classic work entitled "Lombard Street," says, "This unbridled authority was in more than one instance used with the extremest unwisdom, so that devastating panics followed hard upon the heels of the reckless speculation which too great facilities for borrowing had engendered." Such dearly-bought experiences ought to warn us against easy methods of inflation. English statesmen battled for a quarter of a century with the subject of whether gold was at a premium or a redundant quantity of Bank of England notes at a discount. The question was finally settled in 1816 by the adoption of the profound "Bullion Report of 1810." The integrity of her gold standard of payments has since been maintained with a fidelity that commands the admiration and confidence of the whole world, to the extent that London is the world's clearing house, and practically all the nations of the earth pay tribute to Britain. The paramount question to us is, how soon will New York City displace London as the world's clearing house, if we keep on injecting more non-standard currency into our already redundant currency issues?

Under Peel's Act, the banks of Great Britain in 1844 were restricted on issues of bank notes to the amount then outstanding by the banks then existing. Seventy per cent of the right of issue of those banks which have closed since 1844, has reverted to the Bank of England, thus reducing the total uncovered issues allowed to banks in general, all of which are subject to the unlimited liability act as to note issues, to the small sum of approximately £8,000,000, and has increased the issues of the Bank of England since 1844 from £14,000,000 to about £18,175,000 based on securities. All other issues of the bank are covered with gold coin or bullion, thus making the notes practically gold certificates and giving the Bank of England the sole right of issue in Britain. The total uncovered issues in Britain average about $120,000,000, of which $90,000,000 are Bank of England notes based on government securities. Scotch banks, so much harped about, can issue but £2,676,350 uncovered notes. As extraordinary troubles require extraordinary remedies, in order to ameliorate some of the calamitous panic conditions which have overtaken Britain, history says, the Bank of England in 1847, 1857 and 1866, after the panics had paralyzed her progress, on the assurance of the government officials that no prosecution would follow, suspended the bank act as to issuing notes only on the deposit of a like amount of either coin or bullion, and it issued notes to the banking department on deposit by it with the issue department of ample securities. This was an unlawful act, giving elasticity to the currency, but it placed the banking department in an easy condition to "discount freely to all solvent parties." Again, in 1838, the bank borrowed £2,500,000 from the Bank of France during panic conditions, and in 1890, during the Baring troubles, she borrowed £3,000,000; besides £2,000,000 from outside sources, and the panics were stayed. The Barings failed for $105,000,000 and yet their indebtedness was liquidated by the Bank of England with the aid of other local banks without general suspension of cash payments as experienced in the last months of 1907 in the United States. The apparent necessity for these extraordinary acts was that the country had reached a commercial crisis where good securities could not be sold for cash. Suspension and consequent ruin were staring sound commercial houses and banks in the face.

In each case the action of the bank afforded instant relief and

doubtless saved hundreds of millions of dollars to tottering houses unable to meet payments except for such relief. As soon as the pressure was over the illegal issues were retired.

These unlawful acts were parallel to our clearing-house certificates, except that clearing-house certificates have but limited use, whereas the Bank of England notes satisfy the insane demands of frightened depositors and give sufficient elasticity to meet necessary demands for loans to solvent parties so that the wheels of commerce be not stilled. Should the Bank of England be legally empowered to relieve extraordinary pressure on the same lines as in 1847, 1857 and 1866 before paralysis takes place, the benefits undoubtedly would be incalculable. Nearly all political economists criticize this feature, which seems to be the only material defect, without which the Bank of England would be ideal in practically all respects.

Germany

With the exception of only four banks, which are allowed to issue say eighteen millions of dollars of uncovered notes—and these privileges are doomed—the Imperial Bank of Germany monopolizes that right. The bank is allowed to issue now about $112,500,000 uncovered circulation under certain restrictions. Any excess over that sum must pay 5 per cent interest per annum to the government. This excess issue is the only true method by which to obtain relief under panic conditions, as the interest rate will certainly retire the redundant currency as soon as the pressure for funds is over, thus preventing inflation.

It is a noteworthy fact that the Imperial Bank of Germany has raised its discount rate to 7 per cent but once in thirty years, except during our panic of 1907, when its rate was raised to 7½ per cent. It is also a noteworthy fact that during that thirty-year period the bank issued such 5 per cent taxed currency 121 times as a relief measure under pressure. The Austro-Hungarian bank did likewise under similar conditions fifty-five times in the past eighteen years. In the face of the fact that interest rates are lower there than here, such 5 per cent taxed currency automatically expands under pressure and contracts as soon as the pressure is over, thus preventing inflation. This fact defies theory and upsets the absurd claim that a high taxed currency imposes

such a tax on commerce that banks will not use it. Germany's uncovered currency averages say $150,000,000, which is a wide contrast to our $900,000,000 and over to-day.

But enough. These details and the foregoing table are conclusive evidence that elasticity in Europe, by an evolutionary process, has been achieved without producing distrust or inflation.

Issuing Currency is not a Necessary Banking Function

Further, it does not seem to be a necessary function of banks generally in Europe to issue currency at all. As state and other banks in the United States issue no currency, I assert the special privilege ought to be abolished as to the other third, as soon as the banks owning the abnormally low rate 2 per cent interest bonds can obtain payment for them. Banks holding them run great risk of material depreciation should the government for any cause be compelled to issue large sums additional. Let the United States sell its bonds strictly on their merits, as every other nation does. This result ought to be brought about by a slow evolutionary process, and under natural economic laws the channels of circulation would automatically fill the vacuum created with the world's standard—gold. Adam Smith gives an illustration in point in his "Wealth of Nations"—"Money, like wine, must always be scarce with those who have neither the wherewithal to buy or the credit to borrow it. Those who have either will seldom be in want of either the money or the wine which they have occasion for, and a country that has wherewithal to buy gold or silver, will never be in want of those metals." I am strongly impressed that the United States has the wherewithal to buy all the gold and silver we need for a basis of our circulating medium. If some of the poor sections of our country are short on circulation, is it not because they are also short on collateral or wherewithal to buy it?

The Lesson from American History

Let us turn to the United States without specific reference to the disastrous results of continental currency in the eighteenth century, which might be excusable, as the birth of the nation was at stake. The "History of Banking in all Nations" says, in referring to all banks of issue from 1739 to 1841, "The esti-

mated losses on their circulation were 18.1 millions of dollars." Again, on page 337—under "Free and Safety Fund Banking in New York State," "the notes of twenty-five of them were rejected, and all the safety fund notes were at a discount." Again, "In December (1840), it was reported that few brokers would buy the notes of any free banking association," "and the notes of many of the safety fund banks of the interior are regarded with great distrust." John J. Knox, in his history says that from 1789 to 1864 "the probable losses to noteholders were about 5 per cent per annum." Further, the circulating notes of the state banks were subject to violent expansion in times of confidence and sudden contraction when distrust occurred. The runs on the banks were not made by the depositors (for they were few), but by the noteholders.

The pages of these authorities, as well as many others, are strewn with proofs of the sickening details of losses to noteholders, caused by bank issues, some based on credit and others based on various collaterals, clear through the eighteenth, and even past the middle of the nineteenth century. Because much of the currency issued during the latter period was secured by collaterals instead of being a pure credit currency, the nineteenth century experiences lessened materially the comparative losses to noteholders everywhere, but still they were calamitous in results up to the end of the "wild cat" days in the United States. Two generations have passed since then wherein no man has lost a moment's sleep over his absolutely secured national bank notes. We ought not to need, like children, to be told to keep away from the fire. We ought to profit by the experience of the past before trouble overtakes us again.

That word "elasticity" is a sweet morsel to play upon the credulity of an innocent public. It has worried the political economists of all ages. Its ghost still stalks forth in this enlightened day.

Panics and the Monetary Standard

All property was measured in depreciated currency in 1865, when gold was 100 per cent premium and over. Then the premium began to decline year by year, and all property in proportion, until 1873, by which time values had shrunk to about one-half of the prices of 1865. This process undermined all prosperity and was

the underlying cause of the panic of 1873. After specie payments were resumed in 1879 confidence and prosperity revived with a bound, and they have been forging onward and upward ever since at a pace which has astonished the world. A campaign of education has been constantly and successfully waged toward the establishment of the world's standard—gold—upon an unequivocal foundation. Distrust of our standard halted us from 1893 to 1896, when the repudiators were repudiated, and since that date the Gold Standard Act of March 14, 1900, has been written into our statutes, and thus the battle of the standards has been practically won. There are two links missing to complete the chain. They are the elimination of some of our redundant soft money issues, and the adoption of some sound relief measure when panic threatens.

Since 1896, when confidence was restored as to the integrity of our standard of value, the wave of prosperity has been almost continuously rising higher and higher. Under the impetus of rapid fortunes acquired by some Napoleons of finance since 1896, who foresaw that a swelling tide of prosperity was at hand, the get-rich-quick fever intoxicated the many. Nature has been generous in her bounties to us, thus aiding in the development of the rising tide. Another force has been the immense increase in the world's production of gold for the past few years, which doubtless has stimulated the activities and credit expansion of the whole commercial world.

During this period our credit system has grown to collossal proportions. As shown by official statistics, our banking power has increased from 5,150 millions of dollars in 1890 to nearly 18,000 millions of dollars on January 1, 1908, which nearly equals the banking power of the rest of the world. The individual deposits have more than trebled in that period, which largely represents actual not fictitious capital. The gigantic general statistics of our wonderful progress and present condition are too numerous and too well known to repeat.

During the past ten years our circulating medium has doubled in quantity (from 1,500 to 3,000 millions of dollars), until, as a basis for this mighty superstructure of credit, we hold the following amounts of the world's standard of value, that stands through storm as well as sunshine:

Table No. 2.

In gold coin, say	$1,600,000,000
In addition we have:	
In silver (say one-half fiat) about	700,000,000
Legal tender notes	346,000,000
National bank notes, about	690,000,000
	$1,736,000,000

By way of comparison with the most progressive nations, permit the following approximate:

Table No. 3.

In Millions.

	Gold.	Silver.	Uncovered currency.	Per capita circulation.
United States holds	$1,600	$700	$900	$35.50
Great Britain holds	559	117	116	18.08
France holds	1,032	400	120	39.94
Germany holds	917	200	180	22.18

This table shows the United States has nearly as much silver as Great Britain, France and Germany combined, and more than twice as much uncovered currency as all combined. It also shows a per capita circulation almost equal to that of France, where cash instead of checks is used much more extensively than here. This per capita circulation is also so far in excess of either Great Britain or Germany that the redundancy of our currency must be apparent to all.

The Barometric Signal

In view of all these facts, even before the explosion caused by the wild speculation and pyramid banking of the Heinze, Morse, Thomas, etc., outfit; in view of the fact that a high interest rate the world over is the sure barometric signal that the great pyramid of credit has grown beyond the limits of prudence; in view of the handwriting upon the wall as recorded by all the standard authorities on political economy that optimism had outrun conservatism, and that the primary cause of our troubles is over-speculation, I will only quote in proof from one standard authority. Professor Sumner, in his "History of American Currency," tersely sums up the case as follows: "Over-speculation is speculation which outstrips

the capital of the country;" further, "When we lose our heads in the intoxication of our own achievements, look on currency anticipations, which are only fictitious capital, as if they were real, use them as already earned, build other expansions upon them, then we bring a convulsion and a downfall; some time or other a liquidation must come: . . . then credit breaks down and there must be a settlement, a liquidation, a dividend, a new start." I say, in view of all these facts, I cannot understand why the powers that be in the great American Bankers' Association, who ought to be the leaders in conservatism, should undertake to bring about a sentiment to commit this country to eighteenth century fiatism again, by the issue—on top of our vast volume of soft money issues—of over two hundred million dollars of asset or credit currency, as a starter only, according to one of the most aggressive advocates, with only 5 per cent secured and 95 per cent fiat, under the plea of providing an elastic currency to move the crops, notwithstanding crops could not move faster, as transportation facilities have been taxed to their utmost for years. Who wants to move the earth to-day and lie idle to-morrow?

The American Bankers' Association Plan

The American Bankers' Association plan, boiled down and put in cold type, can fairly be diagnosed in this way:

(1) National banks (none others need apply), big and little, in city or country, can indite a letter as follows:

> COMPTROLLER OF THE CURRENCY,
> WASHINGTON, D. C.
>
> Please send to this bank the $25,000, $50,000 or $100,000 of asset or credit currency to which it may be entitled; keep 5 per cent of it on deposit as collateral security; express the other 95 per cent to us, and we will return the same to you at our pleasure, plus 2½ per cent per annum.
>
> Very respectfully,
>
> ....
>
> Cashier.

(2) The Comptroller of the Currency shall designate numerous redemption cities conveniently located in various parts of the

country. Through the agency of the banks in such cities adequate facilities shall be provided for active daily redemption of credit notes. (The advocates of this redemption plan now admit it impractical, so no answer to it is necessary.)

(3) A bank (credit) note is essentially the same in principle as a deposit payable on demand. This is an amazing conclusion. Political economists say, "Coined credit" in the shape of I O U's. issued by banks is fictitious capital. A deposit generally represents actual capital, so no further argument on that point seems necessary.

In reply to the foregoing I issued the following five challenges in a debate before the State Bankers' Association of Minnesota in July, 1907, in response to John L. Hamilton, ex-President of the American Bankers' Association, who advocated the American Bankers' Association plan, to wit:

(1) I respectfully challenge any member of the currency committee or any advocate of asset currency to point to a single progressive country on the earth where small, independent country banks are allowed to issue currency backed by only 5 per cent collateral, the remaining 95 per cent of such currency being purely fiat.

(2) I challenge any man to prove that easy methods of issuing currency have not been discarded in all progressive nations.

(3) I challenge any man to disprove the fact that, with but few exceptions, where charters have not expired, in all progressive nations, only great centralized banks, with very large reserves and rigid restrictions as to loans, are allowed to issue currency at all, and the right to issue is limited under rigid restrictions referred to later.

(4) I challenge any man to prove that the method of redemption proposed—which the asset currency advocates claim as the crucial test of success or failure—has any parallel on earth, or affords any practical assurance that it will work under our banking system.

(5) I challenge any man to prove that "a bank note is essentially the same in principle as a deposit payable on demand," or that "it resembles in character . . . a current deposit liability of the bank."

After the debate what was the verdict of the Minnesota jury? The answer is found in the condemnation of the American Bankers' Association plan, as will be seen by the passage of the following resolution unanimously:

> Whereas, The prosperity of our country is due in a large measure to the absolute confidence of our people in our present currency, be it
>
> *Resolved*, That while we are strongly in favor of some well-secured method to relieve monetary stringencies that will not produce inflation, yet we are unalterably opposed to any plan or change in our currency that does not afford absolute security; hence we do not look with favor upon the plan proposed by the American Bankers' Association committee.

Later, after listening to John Perrin, President of the American National Bank of Indianapolis and member of the association currency committee, in favor of its plan, the State Bankers' Association of Wisconsin passed the same resolutions with only two dissenting voices. Still later,—after the meeting of the American Bankers' Association at Atlantic City, when, with practically an empty house and under discreditable conditions, the plan was apparently endorsed,—the State Bankers' Association of Indiana, after a full debate on the same subject, where O. A. Watts, President of the First National Bank, of Nashville, Tenn., took the affirmative, and I had the honor of the negative side, notwithstanding a strong effort to table the resolutions by able representatives of the American Bankers' Association, the Hoosiers turned down the plan by indorsing in full the same resolutions.

These facts, representing the judgment of bankers when a fair hearing could be had, indicate clearly that the banks of the country generally are against fiat money. The committee of the American Bankers' Association evidently doubted the soundness of their own proposition, as is evidenced by the self-indictment contained in the following quotation taken from the Atlantic City currency committee reported to the convention:

> In all our recommendations principle has, to a greater or less degree, been subordinated to practicability. We have recommended, not what we believe, in the light of experience and existing conditions, to be best for the interests subserved, but what, in the light of existing political conditions, we believe to be attainable, not what was best, but what we might reasonably hope to obtain.

President Roosevelt's Opinion

President Roosevelt clearly grasps the essential weakness of the plan, as will be seen in the following quotations from his last message to Congress, when he refers to the absorbing currency question:

> We need greater elasticity in our currency; provided, of course, that we recognize the even greater need of a *safe and secured* currency, . . . Provision should be made for an emergency currency. The emergency issue should, of course, be made with an effective guaranty, and upon conditions carefully prescribed by the government. *Such emergency issue must be based on adequate securities approved by the government and must be issued under a heavy tax. This would permit currency being issued when the demand for it was urgent, while securing its retirement as the demand fell off.*

The Aldrich Bill

And now comes the Finance Committee of the United States Senate with a bill, in all its essential features, demanding absolute security for all issues to prevent distrust; with such a high tax—6 per cent—as will bring such currency out only under stress, and will surely retire it as soon as pressure is over, thus preventing further inflation. These essentials seem to be ignored under the American Bankers' Association plan, because, under it, the currency, if issued, would be practically unsecured and would still further inflate our circulation.

The American Bankers' Association plan undoubtedly would arouse distrust in the minds of the masses, especially in troublous times, when it is of paramount importance to allay distrust. When panic is on, as the asset currency advocates claim a deposit is the same thing as asset currency, and local depositors are clamoring for cash, why will not eighty million holders of such currency demand coin on their notes, thus more than doubling our troubles under panic conditions? This is exactly what occurred in fiat money days. Taint our currency issues with a breath of suspicion, and our prosperity will be undermined as by an insidious disease. Even the first lien on assets, which would make the currency secure, but which would rob the depositors, is eliminated under this plan, thus increasing general distrust. Again, as the quick redemption theory will not work, which is now admitted by asset currency advocates, does any sane man believe that any bank in the United States

with a right to issue asset currency, practically without collateral, paying only 2½ per cent per annum for the use of it, in the face of a 6 to 10 per cent interest rate clear through 1907, would not have kept out the whole permissible amount for the profit in it, thus stretching the rubber currency to the limit. Under such conditions the reservoir would have been empty when the panic of 1907 struck us. Would not the very object sought, relief under panic conditions, be defeated? The result would simply spell inflation, and inflation spells disaster. Such currency would expand, but not contract. The currency committee seems to have lost sight of the fundamental principle of Gresham's law. Britain, after a campaign as long and as bitter as ours over the Gresham Law, and the expulsion of her gold by the injection of too many bank notes into her circulation, unequivocally adopted the gold standard in 1816. The integrity of that standard, as against the uncertainties of other national standards, has been maintained with a fidelity that commands the confidence of the whole world to such an extent that London has long been the world's clearing house. Will New York soon win that position if we inject an additional quantity of inferior currency into our circulation?

A wise man buildeth his house upon a rock, but the foolish man upon the sand. When the rain descends and the floods come and the winds blow, the wise man's house falleth not, but as to the foolish man's house, great is the fall thereof. Is not this a perfect simile to apply to the building up of the superstructure of our credit system upon a sound metallic currency for a foundation as against the shifting sands of a credit currency? The pages of history are strewn with proofs that when the great instrument of exchange is deranged, all trade, all industry, is stricken as with a palsy. That instrument of exchange recognized by the world as the solid foundation that does not totter when the storm rages in its severest intensity, is the only foundation for a prosperous people to rest upon and to-day our coffers hold sixteen hundred million dollars of it. This is a billion dollar country, and we need these resources. This gold has come to us since 1873 in the natural course of trade, in response to the well-known principles of the Gresham law and monetary science, as expounded by Adam Smith, Ricardo, Jevons, Sumner and many other eminent economists, and as also clearly set forth in what Professor Sumner dubs

the most important document in financial literature, "The Celebrated Bullion Report of 1810 to the House of Commons." I have quoted these maxims before, but deep-seated error requires repetition of them again and again. Summed up these principles are:

(1) The cry of all ages is for "more money."

(2) Rich countries will have all the coin they need, providing no impolitic act of legislation interferes to force it out of circulation by the injection of inferior currencies.

(3) When the coin in any country exceeds the effectual demand, no vigilance of government can prevent its exportation.

(4) It is the province of government to settle the quality question of money, and the needs of commerce will settle the quantity.

In proof of the above maxims, history says, Chinese walls, jails, shot guns or hanging did not prevent exportation of coin, and in these modern days the object lesson of the exportation of more than thirty millions of gold in May and June, 1907, in the face of high interest rates and the plea of the asset currency advocates for "more money in the United States," is more potent than pages of logic. Let us fix the "quality" question and stop tinkering with the "quantity," as the needs of commerce will settle that.

With over 1,700 million dollars of soft money in the United States to-day, would not the injection of 200 to 300 millions of inferior asset or credit currency drive the same amount of gold out under the Gresham Law, thus undermining our metallic foundation for our great credit superstructure? Let us bend our energies to increase our metallic foundation and reduce our redundant soft money issues, if we would avoid trouble as far as human ingenuity can accomplish it. The only true remedy to compel conservatism is to penalize over-expansion of credit, instead of adding an unsecured asset currency stimulant. Throw a life line out to the over-confident, and he will be swimming beyond his depth continually.

Asset Currency Fallacies

The asset currency advocates are continually referring to the Canadian and Suffolk systems, also isolated cases in Indiana, Louisiana, Iowa and other states, as parallel to our conditions. Their arguments are as full of holes as a skimmer, and so-called parallels

are as closely related as the Equator is to the North Pole. They are also continually quoting general European branch banking methods as systems for us to adopt. I stand with the masses of bankers of the country against a few great central banks owning all the banks of the country, because under that system, the branches practically pay no taxes where they are located; there is no real board of directors; few, if any, stockholders to whom dividends would be declared; in short the system simply skims the cream from the country towns to enrich the exchequers of the great centers, as is conclusively proved by the abnormally large profits made by the great central banks owning such branches.

A National Reserve Bank

As our independent banking system has worked wonders in the upbuilding of our hamlets and cities; as the quality of our money is unquestioned, and the quantity more than ample for normal conditions; as Europe has more nearly solved the "Elastic Problem" with fewer objectionable features than any plan yet suggested; why cannot we reject as entirely unnecessary the general branch banking feature, continue, if thought best, the United States sub-treasuries, with modifications as to cash holdings, and bring about elasticity through a national reserve bank. Such a bank would be owned by the banks of the country, and thus the profits would be theirs.

The capital stock might be $50,000,000 and be taken in sums of not to exceed 5 per cent of the capital of each subscribing bank, to prevent monopoly. The Comptroller of the Currency, Secretary of the Treasury and United States Treasurer should be members of the Board of Directors. The National Reserve Bank, if such we may call it, might have authority to issue up to $250,000,000 of national bank notes, as an experimental limit, under a tax of 6 per cent to drive it home as soon as pressure is over.

Again, under strained conditions, or when frightened depositors are demanding cash, and solvent merchants and manufacturers are calling for loans to pay bills and keep the wheels of commerce from being stilled, where is the banker that will not temporarily provide cash, if possible, at 6 per cent or even a higher rate, if necessary, instead of slaughtering sound securities in a hard market? Do not many bankers when capital demands exceed

supply, get rediscounts now, and is much comment made unless rediscounts become excessive?

No interest should be paid upon deposits, nor should loans be made upon stocks, thus giving no aid to the stock gambling element. Such issues should be loaned only under conservative restrictions on quickly convertible securities. I believe if such a bank had been open in October, 1907, the panic with its train of evils might have been avoided, because the gamblers who were the cause of the outbreak could have been refused aid and thus have been weeded out as a future menace. The sound and solvent banks of New York could have been furnished with all the cash needed, because they have ample sound collateral. The country calls for balances in New York could have been promptly met with cash. Suspension of cash payments then would not have been necessary, and the result would have been that the whole country would not have been compelled to restrict cash payments nor to issue clearing-house certificates.

On the other hand, if the American Bankers' Association's 2½ or 3 per cent currency plan had been authorized last winter, the full limit would have been out for the profit in it when the panic struck us. The National Reserve Bank plan will accomplish the object sought in an absolutely sound manner; it will checkmate locking up cash, as was done some months ago by a "bear" to the extent of $5,000,000 in an attempt to bring on another Black Friday onslaught. The banks of the country will not hoard money in excess of needs, because they will know relief is at hand if needed.

It will not lead the bankers of the country generally to further expand their credit and thus feed the fires of speculation which have already gone beyond the limits of conservatism. It will not drive gold out of the country under Gresham's Law by the injection of any more inferior currencies, which must be avoided if our standard of values is to be maintained, and if New York City is ever to become the world's financial center. It will furnish cash at times when necessary to move the crops, or under panic conditions to loan to all solvent parties, that the wheels of commerce be not stilled and general paralysis result. The rate of interest will automatically drive home the extra issues as soon as confidence is restored; inflation will not result and the machinery will be ready for the next urgent call; 10, 20, 50, 100 per cent

money will be unknown; the Secretary of the Treasury will heave a sigh of relief from pressing importunities; every bank in the country, whether national, state, private, savings or trust company, will, directly or indirectly, get relief if entitled to it. In the matter under discussion clearly the trend of all progressive countries is toward the concentration of the power to issue currency.

If this plan cannot be accomplished, then the plan brought out by the Senate Finance Committee, as a modification of Treasurer Treat's plan, will accomplish the relief sought, by the issue of extra currency amply secured to prevent distrust, with a tax sufficiently high to prevent inflation. These requirements are the main essentials.

A third plan, which would accomplish the relief sought, would be the issue of currency based on clearing-house certificates, such as have been lately issued. Such certificates should be deposited with the United States Treasurer as security for such issues. It is cash that fills demands and kills panic.

I prefer the central bank plan, because the machinery works smoothly and automatically, more so than under the second plan, and much more so than under the third. All three are sound, and infinitely better than asset currency, which will only produce distrust and inflation. Confidence upbuilds, distrust destroys. Statesmanship alone should reign. Whatever plan is provided, our standard of value should never be tarnished, because distrust breeds panic. On the contrary our currency should be above suspicion, that confidence, the great bulwark of all progress may be ours to the fullest possible extent.

PANIC PREVENTIONS AND CURES

By Henry W. Yates,
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The United States has periodically been afflicted with financial cataclysms, popularly called "panics." They have marked turning points in trade and development, where prosperity and "good times" have given place to liquidations and "hard times."

Other countries have not experienced these almost regular revulsions, and from this fact it may be inferred that they are unnecessary here. Wild and speculative business enterprises and dishonest or reckless banking and trading cannot be entirely prevented or guarded against, but their effects ought to be confined to the interests directly concerned, and not permitted to affect entirely distinct and different affairs. And, on the other hand, the peculiar character of our business operations—their great and varying magnitude, moving forward at one time with astonishing rapidity and then subsiding with equal suddenness—clearly shows that the conditions here are very different from the staid and orderly movements in the business of the old world.

Panics or trade revulsions, therefore, may be unavoidable with us at some periods, or at some stage of business progress. Those which have occurred in the past can be clearly explained by natural causes, and it therefore may be believed that no panic of the character described can occur unless there is some natural cause or explanation for it.

In the present disturbance there does not seem to be a single natural cause to account for its occurrence. We have had no crop failures—that prolific cause for financial depression. On the contrary, our crops of all kinds have been unusually good and the prices of farm products taken together have never been better. The reduction of farm mortgages in the West and the growth of bank deposits in rural communities indicate remarkable strength in material wealth.

Our mines for both the precious metals and the crude products have been operated to their fullest capacity with the largest pro-

duction ever known, our factories and mills have been unable to fill their orders, and business of all kinds has been expanded apparently upon safe and conservative lines to an extent never before known. Immigration of laborers from Europe has been enormous, exceeding any period in our history, and yet all classes of labor have been fully employed at good wages. This situation is in strong contrast to 1892 or thereabouts, when Coxey's army of the unemployed marched on Washington. Judging from these and many other facts, it may well be doubted if this is a panic similar to those which have formed such memorable epochs in our national history.

It may prove to be more of the character of the spasms which occurred in 1884 and 1890 and which have never been dignified with the name of panics. Those who believe in the mysterious theory of cycles must take notice of the fact that from 1857 to 1873 is sixteen years—while from 1873 to 1893 is twenty years, indicating what would be expected, a lengthening and not a shortening of the periods; counted in this way, the real crisis is not due. But whether this is so or not, the situation is sufficiently serious to call for the closest consideration. It proceeds apparently from impulses in trade and commerce of annual recurrence, which only need some special exciting cause to make them full of the gravest possibilities.

If the trouble is due to some weakness in our banking establishment—if it is something that legislation can remedy—then surely the needed legislation can be obtained. But until those credited as experts in finance can agree among themselves upon some plain and definite corrective procedure, instead of advancing all kinds of revolutionary schemes—using the situation as a club to advance them—it should not be a matter of surprise that public sentiment cannot be roused in favor of the so-called reforms, and legislators will be slow to adopt any of the schemes proposed.

Causes of Disturbance

The present disturbance has originated in New York. This is no reflection upon New York. That city is the heart of our financial system. We must look to it for all that is good in it, and it would be singular if anything bad should not also be evolved and developed there.

We must go back at least as far as April, 1903, when the great stock panic occurred, to discover the determining cause of the present situation. The extent of the drop in prices at that time and immediately following is indicated in the quotations of three first-class railroad stocks, which are selected as ones that would be the least affected by any depression:

	1902.	April, 1903.	Subsequently in 1903.
New York Central	168⅞	128½	112⅝
Pennsylvania	170	132½	110½
Chicago and Northwestern	271	174	153

The average loss indicated by the above figures which must be less than the average of all the stocks dealt in, if applied to the aggregate of all stock listed, would reach a sum that would dazzle the mind. It was a real shrinkage in apparent wealth, although the fall occurred without regard to net earnings and dividends which underwent no decrease. During the following years there was more or less recovery, but nevertheless the New York money market was seriously affected by the great capital loss shown in the depreciation of stocks and has been in a sensitive condition ever since. The same stocks have now fallen as low as 91½, 103½ and 126 respectively.

The reasons advanced for the tremendous fall in stocks and bonds have been various. Many influences may of course have had their bearings, but there is one fact which is undeniable, and is sufficient of itself to account for it. This has relation to the capital supply.

The productive resources of this country have been so enormous that capital sufficient to carry through almost any enterprise or undertaking, no matter how many millions or even hundreds of millions were involved, seemed at hand for the asking. It is a matter of wonder and bewilderment to the ordinary thinker where all the capital has come from to swing the enormous undertakings, which have been planned and carried through to successful termination during the last decade.

Notwithstanding these vast expenditures of the past, still vaster ones are planned for the future. A French financial writer has recently called attention to these tremendous proposed outlays of capital. He estimates the annual requirements of the United

States alone as $2,500,000,000.00, while our national income he says does not amount to one-third of that sum. He also shows that these extraordinary demands to be made upon capital are not confined to the United States, but extend in growing volume all over the world. Within the past decade the losses or wastes of capital have also been enormous. In this country we have had the Spanish War and San Francisco fire, while Europe has had to finance the Boer and Russo-Japanese Wars—the latter estimated alone at three billions of dollars.

The question of capital is, therefore, of world-wide application. There must be a limit to the available supply, but the strain upon the supply can only be developed in the course of events and cannot be easily anticipated. It will of course be shown in the rise of the interest rate. When new securities are placed upon the market upon more advantageous terms for the lenders than previous offerings, the price of the latter will naturally fall, and continued drains upon the capital supply must have the same effect in raising the interest rate that the ordinary law of supply and demand under similar conditions has upon the price of commodities. There is quite a difference in the value of a long-time security figured upon, say, a 3½ per cent basis and at 5 per cent or more. It is therefore quite clear that the depreciation in stocks and bonds caused enormous losses to their holders, and the effects of such losses would also be evidenced in the money dealings. The direct effect it had upon the banking business in New York is shown in the loss in bank deposits. The statements of the national banks for August 22d this year, compared with same period in 1906, showed a loss for the New York City national banks, in individual deposits alone, of $126,000,000.00, while the banks in the country outside of New York had gained $245,000,000.00.

The Panic

The exposures of the methods pursued in the Heintze and Morse banks, the troubles of the Mercantile and connected national banks, and runs on the trust companies, culminating in the closing of the Knickerbocker Trust Company, were sufficient to cause the excitement which followed and rendered imperative the suspension of currency payments by the New York banks. But this action undoubtedly led to withdrawal of capital from active use in another

manner to a far greater extent than was indicated by the bank runs. The suspension in New York, followed by similar action in all of the reserve centers, was a severe shock to bankers everywhere. The dread specter of bank runs possessed their minds, and a craze to accumulate currency became a feature with nearly every bank in the country. This action on the part of the country banks was entirely natural and cannot be properly criticized. It is the almost inevitable result of an erroneous banking system. When New York is afflicted with a greatly depleted capital supply and currency is demanded to satisfy depositors, relief in time will be obtained from London and other parts of the world and from the United States Treasury, if it has any funds that can be deposited. But the interior banks are in an entirely different position. Having nothing to expect in the way of aid if needed from New York or other clearing-house centers, they must rely solely upon themselves. Self-preservation is the first law of nature, and they must accumulate all the currency possible in the expectation of a contingency which may never materialize, but the fear of which is as real in its effects as if it were an actuality.

The reserves not only of the country banks, but of all banks, with few exceptions, everywhere, will be shown by the reports of December 3d to be increased anywhere from 25 per cent to 50 per cent over what they were on August 22d, and they were excessive at that date. A contraction of active capital to this extent within so limited a time must be of ominous portent to the business of the country.

Temporary Cure

An emergency circulation of the character of that recommended by President Roosevelt would without doubt be effective as a temporary measure. The problem involved is a simple one. In some manner the capital withdrawn by frightened banks and bank depositors should be returned to circulation. The difficulty is that it will come too late to serve the present disturbance. It will take too long a time to enact the law and prepare the notes to be circulated. The lesson, however, ought not to be lost even if the measure should not become effective until a like disturbance occurs in the future. It can plainly be seen that if an emergency circulation had been at hand for immediate use, the present crisis

would have been controlled at its inception, to the great gain of the country at large, and at no expense or risk to the public. On the contrary the public revenue would have been increased from the tax collected.

There should not be any disagreement as to the particular method to be adopted. The object of the emergency issue is to relieve the business situation, and it is especially intended for those banks carrying the loans of manufacturers and dealers, so that these may not suffer too severely from the sudden contraction of loanable funds.

If it is based solely upon approved municipal or corporation securities, it will be of special benefit to the owners of such securities, and of only indirect benefit to the interests to be served. Clearing-house loan certificates, secured by a pledge of actual commercial securities guaranteed by strong banks, would seem to be the most acceptable security for the purpose. The aid would then be given exactly where it is needed, and the certainty of the retirement of the notes within a reasonable time would also be secured. Emergency circulation, however, is only an expedient to relieve a condition which ought to be of almost impossible occurrence.

Asset Currency

The peculiar weakness of our banking system has long been recognized and commented upon, but the plans suggested for its reform have almost uniformly favored the issue of uncovered bank notes, generally called "asset currency." The weakness referred to has been almost annually demonstrated—first a period of redundancy then one of stringency, frequently accompanied by panicky conditions. These varying circumstances are explained by many as due to defects in our currency system. It is asserted that our money is not elastic as it should be; that it does not expand and contract with the demands of trade, and that in these respects our currency is different from that used by other great commercial countries, and hence the difference between the operations of their money market and ours. To cure these defects, it is insisted that authority should be given the national banks to utilize their credit, or, as has been said, to "coin their credits," by the issue of a

certain amount of bank notes without the security of government bonds, or, in fact, without any pledged security. Judged by the amount of brains exercised, and energy, as well as money, expended during the past ten years in the furtherance of these views, it would seem that some decided, favorable impression would have been made upon the public mind. Doubtless many views have been molded by what appears to be the unanimous conclusion of financiers and money experts who have given the subject special consideration. The American people, however, will go slow in accepting these conclusions. The money question is not the peculiar cult of a class, but, thanks to the education of the political campaigns in recent years, it is one open to all classes, and especially business men, who will instinctively refuse support to measures which involve change—and perhaps radical change—in the foundation of all business enterprises.

The arguments offered in favor of the scheme are also not sound or convincing, and some misconceptions conveyed concerning other currency systems can be easily corrected.

The quantity and character of our money supply on November 1, 1907, were as follows:

Gold coin and bullion	$1,561,714,719
Silver dollars	568,249,982
Subsidiary silver	136,201,145
U. S. notes	346,681,016
National bank notes	656,218,196
	$3,269,065,058

Population 86,666,000, per capita	$37.72
Compared with other countries:	
Great Britain, per capita	18.02
France, per capita	39.94
Germany, per capita	22.13

The total volume of money in Great Britain is $787,600,000, which is only about one-fourth of ours, and yet with this supply she manages not only her own finances, but those of a great part of the world.

The per capita comparison is still more startling for that portion of our circulation dependent upon gold for its parity therewith:

U. S. notes and national bank notes	$1,002,899,212
Deduct gold reserve	150,000,000
Total uncovered	$852,899,212

United States, per capita	$9.84
Great Britain, per capita	2.67
France, per capita	3.02
Germany, per capita	3.53

If we add to our uncovered currency, silver certificates $464,-349,568, which are also dependent upon gold, the per capita is increased to $15.20.

These comparisons show that we have the largest volume of money of any country in the world, and that, with the exception of France, which we nearly equal, we have the largest per capita. Our uncovered paper has a per capita more than three times that of any other country, not excepting France. This apparent over-abundance of money is admitted by those who urge the asset currency scheme. One of the members of the American Bankers' Association has this to say:

"Commerce really suffers more in the long run from periods of over-abundance of our present circulation than from those of scarcity. The origin of each recurring period of tight money can be traced to preceding periods of easy money. When the maximum demand for currency occurs, so much of it is required that the banks with difficulty maintain their legal reserves, but when the demand is at its minimum, the currency accumulates in their vaults and they resort to forced loans, inflated credits, cheap rates and other artificial methods to keep it employed and earning something."

If it is as this writer states, the excessive quantity of our existing currency which causes the over-abundance of loanable funds at certain periods, in what manner can that situation be improved by an addition to that quantity?

Will not the additional circulation tend to intensify the evils complained of?

The over-abundance, however, referred to is not necessarily "currency," although this writer conveys that idea. In actual effect it is an increase in cash resources by means of increased deposits or by the payment of loans. If during this period, in order to keep

the excess funds "employed and earning something," the banks make "forced loans" and extend "inflated credits," it can easily be seen that when the "tight money" period comes they are in no condition to make the legitimate loans which the business interests of the community demand. To authorize the issue by the banks of a credit currency under such conditions would be an economic error and one that in the end would cause greater disasters than those its issue was intended to prevent.

That it is not merely an excess or redundancy of currency which causes the shifting periods can easily be seen by examining statistics. The actual volume of cash held by the New York banks does not vary greatly in the course of a year, and yet during the same time large excesses or deficits in reserves will be shown in the weekly reports. Comparison between the last summer statement and the first fall one in the reports to the Comptroller for a number of years past will show that the volume of cash held has oftener been larger in the fall than in the summer, and disproves the idea that it is solely a currency drain which marks the activity of that period.

It is asserted that the proposed notes would not be a permanent addition to the circulation—that having performed the service for which they are intended, by some means not clearly shown, they will be returned to the issuing banks and canceled. In the American Bankers' Plan a tax of 2½ per cent per annum is imposed upon the first issue—this however would not be sufficient to cause the return of the notes in even the easiest money period. It is possible that some eastern banks would then retire them, but the proposed issue is for banks all over the country and in sections where such a low interest rate is unknown.

Hon. Charles N. Fowler, the persistent advocate in Congress of asset currency, in his plan wants no tax. In a recent speech he says:

"Our bank notes must spring into existence precisely as checks and drafts do, through business transactions. Our bank notes should be related to and based upon the consumable commodities of the country, going out with production and coming in with consumption." These are brave words but highly figurative. It will be easy enough to spring them into existence with or without production, but what is there to bring them back with consumption?

Where hangs the string to this kite that will anchor it safely and bring it to land when desirable? The American people of this generation are not accustomed to any but the best kind of paper money. It has passed readily from hand to hand with unquestioned credit, and has continued to circulate until worn out. The only thing besides a tax that will force redemption is doubt as to the continued goodness of the notes.

If the money Mr. Fowler has in his mind is similar to "checks and drafts"—such money, for instance, as the banks throughout the country have recently been forced to put out, much to their own disgust as well as that of their customers, then we may be able to understand what he means. It will come back, all right, provided it ever gets out, but the country wants no such money as a constant diet.

The assertions made concerning the use of similar currency in other countries have very slight foundation to support them. For instance, Mr. Fowler in this recent speech declared that "no civilized country now has a bond-secured currency such as we have, and no country ever did have such a currency." This statement is made in face of the fact that the Bank of England's "fixed" issues are against government securities, and aside from these issues, that great bank does not put out a single pound that is not against a similar amount of gold coin or bullion.

Much also is said concerning the elasticity of the Scotch bank-note system. In a recent paper by Mr. George M. Coffin, this elasticity is sought to be shown by figures. He states very correctly that no paper currency "uncovered by coin" can be issued by the banks of Great Britain, except their "fixed issues," determined by Act of Parliament and limited to the circulation existing at the time of the English Bank Act of 1844, extended to Scotland in 1845. These "fixed issues" of the Scotch banks he gives as £2,676,350 ($13,000,000). The elasticity of British currency he says "is confined within the limits of the 'fixed' issues of uncovered currency."

He then gives a table of circulation for a number of months in 1905-06, the maximum during the period for the Scotch banks being £8,091,692 and the minimum £6,906,103, the difference being the extent of the elasticity claimed. As the fixed issues only aggregate £2,676,350, the figures in the table are all at least three times

the sum of the fixed issues, and if they show anything it is that the entire fixed issues are constantly out, with neither accession nor diminution to their quantity, and therefore are about as inflexible as any money could be. The remainder of the note issues are covered by coin. In this country we would not be willing to accept, as an example to be followed, the currency system of Scotland, in which the note circulation can only be increased as the gold reserve is increased, and must be decreased as the gold reserve goes down.

Viewed from every standpoint, the proposed issue of credit bank notes should be deprecated. Their use is not sustained by the practice of the most enlightened financial power, nor is it demanded to correct any defect in quality or lack in quantity of our existing currency. That currency possesses in a high degree the elasticity which gold possesses in a larger field, moving as the representative of capital from one part of the country to the other, just where it may be most needed. Its free movement however is trammeled by law, whereas legislation has always failed to hinder the international movement of gold. This leads to the consideration of the real weakness in our banking system.

Inelastic Bank Reserves

The weakness lies in the immobility of our bank reserves. In Great Britain no reserve is required by law to protect bank depositors, but with us both under federal and state statutes a fixed reserve of a stated ratio upon deposits is demanded. Dealing as they must with such a multitude of banks our law-makers have adopted this expedient as the best protection at hand.

Mr. W. R. Lawson, an English financial writer, in an article published some years ago in the "London Bankers' Magazine" (republished in the "New York Bankers' Magazine," February, 1903), comments upon this feature of our banking system as follows:

"We wish to point out that a very large portion of United States currency is a legislative fund only, and but for certain laws might be dispensed with. The *raison d'etre* of such law-made money is to guarantee bank deposits, in other words to insure safe banking. Thus a large part of the currency exists not for purely monetary but for banking reasons. It is the workman and not the tools that are at fault. As a purely monetary proposition there is

no proof whatever that the United States has an insufficient currency. The official statistics indicate that even eighty millions of people have no real use for $2,336,000,000 of circulating medium. Moreover 'elastic' banking is required then, rather than 'elastic' currency." What this intelligent and observing foreigner says concerning our money system will be admitted by every thoughtful investigator.

It is this struggle between banks to maintain reserves that almost annually brings the country to the verge of a panic.

The following figures will show the amount of cash reserve required by law as shown in the national bank reports for August 22, 1907, and the cash actually held at that date:

	Required.	Held.
Central reserve banks	$301,371,801	$321,361,557
Other reserve banks	177,929,155	205,397,797
Country banks	157,629,879	238,141,834
	$636,930,835	$764,901,188

In the above statement the central reserve banks held 6.6 per cent of legal reserve more than required, the other reserve banks 15.4 per cent, and the country banks 51.3 per cent—all of which is very suggestive considering what occurred only a few weeks afterwards. This is the showing for 6,544 banks out of a total of nearly 18,000 of all kinds. We are not prepared to agree with Mr. Lawson as to the uselessness of these reserves. It is true that an equal amount of protection would be given if a large portion of them was composed of good interest-bearing securities instead of money. The money reserve however serves a double purpose—it is both security and money, and therefore the very best kind of reserve under the conditions imposed by our multitudinous banking system. No one would recommend the lessening of this required reserve of cash on hand; on the contrary there is a tendency to increase it.

The reform plainly needed is some plan by which these reserves may be utilized without impairing or endangering their value as security for deposits.

In this connection a government bank is suggested and perhaps is received with more favor than any other scheme proposed. There is much to commend in the idea, provided its scope could

be confined to transactions between banks. This limitation would probably render the scheme impracticable, and an organization of the kind for the prosecution of a general banking business would be as little favored by bankers as it would be by the public generally.

So many plans have been offered as certain cures for our financial ills that the writer hesitates to add to their number. But if his diagnosis of the trouble is correct, if it is admitted that a large volume of currency is constantly hoarded as bank reserves, which, in times needed, should be utilized as working capital to aid the legitimate business enterprises of the country, then it would seem that the problem is a simple one.

In the opinion of the writer the difficulty may be largely if not entirely solved in an effective manner along the lines of what we already have in practice.

Measures Suggested

First.—The cash actually required on hand in banks should be simplified and made to embrace the various kinds of our money held under the general term "cash." A detailed statement is now required in reports showing the different kinds of money on hand, and all of it is counted as reserve except national bank notes, nickles and pennies. There is no just ground for this exclusion of national bank notes. Our money is all of equal quality. The bond-secured notes have more security back of them than the legal-tender notes. They are public obligations and not ordinary bank notes, for the government guarantees their payment, and is secured in so doing dollar for dollar by its own bonds, and in addition thereto a reserve of legal-tender money deposited with the Treasurer of the United States. These notes have performed a valuable public service in the support of the government credit. By their means the financial credit of the United States has been made higher than that of any other nation in the world, its long-time 2 per cent bonds selling in the market at from $1.05 to $1.10, while 2½ per cent British consols bring little more than eighty cents.

The public recognizes no distinction between legal-tender money and other kinds which are not legal tender, such as gold and silver certificates, as well as national bank notes. All have equal credit and pass readily from hand to hand.

In fact dense ignorance prevails among all classes of people

as to what is legal tender and what is not. An amusing illustration of this fact occurred in an editorial a few weeks ago in one of the most popular New York banking journals. Under the heading "Legal Tender" the article said: "Indifference and ignorance on the subject of legal tender is widespread and colossal. Among the few wise things along currency lines which have been done in this country is the adoption of the English system of composite legal tender. Gold is our only legal tender in unlimited amounts. Greenbacks and silver are legal tender up to a certain fixed sum, beyond which the acceptance of them cannot be compelled."

Of course the editor had not perused recently what is printed on the back of every greenback and had forgotten all about the "dollar of our daddies." It is not necessary that the bank notes should be made legal tender, but in view of the fact that fixed reserves are intended mainly for the protection of depositors, will anyone maintain that this protection is weakened if national bank notes are so counted?

Second.—The banks should be encouraged to keep a portion of the fixed cash reserve with the Treasurer of the United States. This would be accomplished if the balances maintained with the Treasurer were allowed to be counted as cash on hand. In Great Britain the banks in making reports include in their cash on hand money on deposit in the Bank of England.

Third.—The existing practice of the Secretary of the Treasury in lending public funds to the banks upon approved securities should be further extended, so far at least as this bank fund is concerned. Instead, however, of depositing with specially selected banks, it should be arranged in the form of direct advances to all banks supplying satisfactory securities. In order to effect this, open accounts should be maintained with all the banks, and they should be permitted at all times to draw on the Treasurer, first, to the extent of their credit balances, and, second, to the extent of the treasury value of the approved securities held by him.

In order to more formally pass on these securities a board of treasury officials may be created, composed of say the Secretary of Treasury, Secretary of Commerce, and Comptroller of Currency. To this board should be given the power to fix, from time to time, the interest rate which should be charged on all daily debit

accounts, the interest collected in this way to be distributed to the credit accounts somewhat in the same manner as interest distribution is now made in clearing-house associations upon loan certificates. The expenses should also be provided for by a just and equitable tax upon the banks.

This plan would of course require more clerical force than the department now accords to this business, but as both deposits and checks would be in round sums, much of the complication of a regular banking business would be avoided.

As the interest rate advanced, the greater would be the inducement to increase deposits with the Treasurer, and this advance and fall of the interest rate would supply in a steady and comprehensive manner a financial barometer of monetary conditions, which is now absolutely lacking. It now requires but comparatively a small drain upon the New York bank reserves to cause all kinds of perturbations in the money market.

Estimating that one-half of the present fixed cash reserves of the national banks should be deposited with the Treasurer, this would alone provide a fund of over $300,000,000. No interference would necessarily occur with that portion of the reserves which may be maintained with national bank reserve agents. With this plan in successful operation, it may easily be conceived that the instability now afflicting our money system would in a large measure be corrected, that the annually recurring periods indicating incipient panics would be prevented, and the danger avoided of absolutely uncalled for financial revulsions, with their attending commercial and industrial losses and suffering.

THE NORTHWEST IN THE RECENT FINANCIAL CRISIS

By A. L. Mills,
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The story of the panic of 1907 varies little from that of former panics. If, however, we profit by its lessons and evolve from its troubles proper financial legislation that in future will protect our banks and commercial interests against danger and loss, the panic of 1907 will not have been without compensation. As was the case in 1857, this country in 1907 was seemingly most prosperous. There was much railroad construction, involving the sinking of a great amount of capital far beyond what was immediately productive; speculation was rife, accompanied by much extravagance in both public and private life; graft and dishonest business methods were exposed; money was in increasing demand at steadily rising rates; there were many strikes and labor was dictatorial in its demands; real estate was active and there was a reckless expansion of all credit.

These conditions are the familiar forerunners of every panic; but our people paid no heed to the warnings uttered by students of finance, spoke jestingly of "a prosperity pinch," and went on in search of easy wealth until the failure of the Knickerbocker Trust Company in New York plunged the country into a senseless panic. As in 1857, the failure of the Ohio Life and Trust Company of Cincinnati; as in 1873, the failure of Jay Cooke & Co.; as in 1893, the failure of the Philadelphia and Reading Railroad Company and the National Cordage Company, so in 1907, the failure of the Knickerbocker Trust Company marked the end for some years to follow of our country's reckless financial operations.

The bankers of the Pacific Northwest were not altogether unprepared for financial trouble in the East; they had read the handwriting on the wall and were warned of approaching danger. And yet, when the storm broke, they were not prepared, for they found themselves stripped of their Eastern balances and forced to depend upon the actual coin within their vaults. Confidence, begat by the

knowledge that the Northwest was out of financial bondage to the East, that the whole world was calling for its lumber, that an immense wheat crop had just been successfully harvested, which England was eager to buy at highly remunerative prices, was destroyed in a second, and for a moment the people of the Northwest could see nothing before them but disaster.

Prior to October 28th the Pacific Northwest had watched with interest, but with no concern, "the rich man's panic in Wall Street," had noted the struggle of the Copper Kings, the failure of the Knickerbocker Trust Company and the great run on the Trust Company of America. The troubles in New York were interesting, but did not closely concern the Northwest. But on October 28th all was changed. Telegrams poured into Portland from bank correspondents all over the country, "Cannot ship you coin or currency against your balance. Make your drafts payable only through the clearing house. Advise you organize for your own protection." The financial machinery of the United States had broken down and in a flash business was paralyzed.

The Portland bankers then carried in their vaults but the usual amount of coin necessary for the ordinary transaction of business. When the shock came, October 28th, they had barely begun to shift their balances westward, an action always necessary at crop-moving time. Face to face with the problem of moving thirty millions of bushels of wheat, threatened by frightened and hysterical depositors, with no funds other than those then in their vaults, they sought aid from the governor of the state. His excellency at once grasped the situation, and on October 29th declared a legal holiday that continued, with the exception of three days, from October 29th until December 16th. On the latter date Portland returned to normal conditions, the first of all the larger cities to remove all restrictions on payments. The return was accomplished without trouble or excitement; the people had had time to cool down and the good sense and loyalty of our citizens did the rest. But though there was a legal holiday from October 29th to December 16th, the banks of the state kept open. The holiday gave protection to the banks against hysterical depositors, prevented attachments being levied on the state banks and made possible the restriction of payments.

The moment a holiday was secured the Portland banks, on October 29th, authorized the issuance of clearing-house certifi-

cates for use between the banks in settling balances. One million dollars in certificates were issued, but by December 16th six hundred and thirty thousand dollars worth had been retired. The most difficult problem to face was to finance and move the wheat crop. There was not enough coin in the banks and some sort of a circulating medium to serve as an emergency currency had to be devised and one that the people would take.

Printing-presses were set to work manufacturing what was known popularly as "Wheat Money." The banks agreed to take it on deposit or in payment of debts. This was necessary to give the scrip negotiability. This emergency currency was in denominations of $1.00, $2.00, $5.00, $10.00, and $20.00, and in all over a million dollars were placed in circulation. In the main it was secured by wheat in warehouses, covered by insurance, and for every dollar of scrip so issued there was in the warehouses $1.50 of wheat. Some small amount was issued also against approved bonds in the same ratio. The currency was readily taken in all the stores and by the railroads, and yet it was liked by no one. Better secured even than national bank notes, since behind national bank notes ultimately is only the tax-raising power of the United States, nevertheless Portland's wheat money, lacking the power of legal tender, drifted quickly back into the banks. Such in brief is the story of the panic from the view point of the Pacific Northwest. What of its lessons?

To him who was in the control and management of a national bank in Oregon in the fall of 1907 two dangerous faults in our existing financial laws were strikingly apparent, to-wit, the utter weakness of the fictitious system of bank reserves, and the total inadequacy of our present financial system to withstand the onslaught of unreasoning panic.

Fictitious Reserves

In an address delivered before the Washington State Bankers' Association at Whatcom, July 23, 1903, the writer, in speaking of bank reserves, said as follows:

"Under the present National Bank Act, in other than reserve cities, a bank is permitted to loan all but 15 per cent of its liabilities; of this 15 per cent three fifths may be deposited in a reserve city; and the banks of a reserve city are permitted to deposit one-half

of their 25 per cent reserve in New York, Chicago or St. Louis, where the national banks are required to keep but 25 per cent in coin. Has it ever occurred to you how small an amount of coin is thus behind the deposits of the country? How dependent all the banks of the country are upon the resources of the great banks of New York, Chicago and St. Louis? The restrictions of the National Bank Act may, in the opinion of the framers of that law, be sufficient protection to the depositors, but does anyone here think it reasonably safe banking to have but a little over 6 per cent in cash behind his deposits? And yet a compliance with the National Bank Act requires but that much coin. For instance, a national bank in Whatcom has $400,000 deposits; of its $60,000 reserve $36,000 may be kept in Portland; against the $36,000 Portland must keep a reserve of $9,000, of which $4,500 may be in New York, and New York is required to keep but $1,125 of this on hand. To meet the $400,000 in Whatcom the requirements of the National Bank Act are fulfilled with only $29,625 cash, or a trifle over 7 per cent. This may be sufficient protection to the public, but when Uncle Sam deposits his money, he requires as security dollar for dollar in his own obligations. When we note how closely the banks of the country are knit together, how dependent they are upon one another, is it a matter of wonder that a panic in Wall Street is felt throughout the length and breadth of the land? Is it wise to be so dependent? Should our banks not be more independent? And to do so should they not carry more of their reserve in their vaults?"

But these remarks only referred to national banks and their reserves. When account is taken of the scanty reserves maintained by state banks, private banks, savings banks and trust companies, the amount of actual reserve behind the deposit liability of the country dwindles to such small figures that one staggers with amazement at the vast amount of credit that rests upon a single dollar. With this thought in mind need one be surprised that a run on the Trust Company of America caused a currency famine in New York, the effects of which were felt throughout the length and breadth of the land?

In framing the National Bank Act (of which most state bank acts are but loosely-drawn imitations with more lax restrictions) the theory seems to have obtained of concentrating the actual

money of the country in the large cities. A reserve that is on deposit with another bank is not a cash reserve. The only cash reserve is coin in the vault. It is a good asset of the bank, but by no means cash. The present system of reserve on reserve, reserve on reserve, makes it more difficult to find the true reserve than it is to find the elusive pea in a shell game.

The complete breakdown of the present system of reserve was illustrated in the recent panic. Beyond permission to draw against their balances in "Clearing House Funds" the legal reserves maintained in the East by the banks of the Pacific Northwest were almost valueless as a source from which to draw funds to meet the demands of depositors. The banks were forced to depend upon the actual coin in their vaults and to manufacture such other circulating medium as the suffering public would endure. Does not this experience prove that our system of reserves is a fiction, false in theory and worthless in practice?

If banks were required to maintain in their own vaults the full legal reserve there might be contraction of credit for a time, but the financial institutions of the country would be on a sounder basis. However, there is little hope for change, especially as long as the payment of interest on daily balances exists to arouse the avarice and befog the judgment of the average banker.

The Weakness of our Financial System

That a currency famine in New York should endanger every financial institution in the Union, and in a year of bountiful crops and great prosperity cause a widespread and senseless panic is sufficient evidence of the extreme weakness of our system of finance to cause every Doubting Thomas to favor currency reform at once. Writing forty years ago Robert Baxter said, "provision should be made for such a contingency as a panic, so that, when hoarding interrupts the necessary flow of currency, a new stream may, under proper safeguard, be created and the course of business sustained." The necessity for such a provision, for the issuance of some kind of an emergency currency, had ample illustration in the fall of 1907. Every great city and many smaller ones in October and November issued clearing-house certificates for use in settlements between banks, and in addition, in order to

prevent the utter stagnation of business, issued in unlimited quantities clearing-house scrip of small denominations.

Can there be a better example of what reform is needed in our financial system than the fact that throughout the length and breadth of our land local emergency currency was issued to discharge the duties of a national currency that had largely disappeared from circulation? As a supplement to the national currency this suddenly-developed circulating medium served its purpose well. Without concerted action on the part of the banks, in a night, this local emergency currency sprang into existence to perform the daily exchanges of business. The emergency that called into existence having passed, it quickly gave way to the better currency and was retired.

How much better a true emergency currency with legal tender qualities would have been, any one who handled the hundred different kinds of clearing-house scrip can bear witness. Had there been provision for an emergency currency as in France and Germany, and in a measure in England, the financial disturbance in New York would not have involved the entire country. The frightened depositors of that city would have been met with an ample supply of funds and New York's financial institutions would have paid the price, for no plan for an emergency currency should ever be adopted that does not include a steadily rising tax to be levied upon the banks taking out such currency; and the tax should be no light burden, such as three or four or even five per cent, lest in avoiding panic we are ruined by expansion.

Sumner says, "Any device which has elasticity for its object will have expansion for its effect." And expansion spells ruin for our financial system. We therefore must beware of the expansionists with their asset currency nostrums and keep ever before us that the standard of value is gold and that gold can carry but so much burden. Overload gold with too great an amount of paper promises to pay and the precious metal will leave our shores and we shall be dependent upon fiat money. Better a panic every year than gold at a premium.

How should our laws be amended to permit the issue of an emergency currency that shall be sound, be quickly issued when required, and rapidly retired when the emergency is passed? The best plan proposed is a central bank of issue, approaching as nearly

as possible to the Imperial Bank of Germany. But it is to be feared that the intelligence of the average congressman is not of high enough order to rise above fear of local prejudice and to permit him to vote for the good of the whole nation, if it does not suit his local banker. Should the unexpected happen, however, and Congress rise to the needs of the country and pass a bill for the establishment of a central bank several points must be covered:—

1. The government must have a voice, and perhaps a controlling one, in its management.

2. No one section of the country should be permitted to dominate in the directorate; all parts of the country should be represented.

3. The bank should be a bank of issue and not of deposit. Its profits should be derived from lending its circulation and its debtors should be the banks of the country.

4. To it alone should be given the power to issue an emergency currency, and care should be exercised in the amount of gold reserve.

5. The national bank currency and greenbacks should be retired.

If the central bank cannot be established and we have to work with the tools we have on hand, which is more than likely since changes come slowly, then to the national banks should be given additional powers. They should be permitted to take out an emergency currency to the extent of 50 per cent of their capital on comparatively easy terms. This currency should be a legal tender and in all forms like the present notes. It could be protected by a small tax on all the national banks as well as by deposit of securities. Above all and before all it must be taxed on a rising rate such as will make sure its retirement when the emergency passes. Panics come quickly and do not last long, so that the emergency currency should be promptly issued and as promptly retired.

The panic of 1907 has passed into history; whether its lessons will have taught us aught of good or will bring about reform in our financial system remains to be seen.

NEGLECTED ASPECTS OF CURRENCY AND BANKING

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When in the early months of 1902, Mr. Shaw took the treasury portfolio, the country was passing through a period of marvelous financial activity. Four years of commercial and industrial consolidation, four years of trading in new corporate issues, "on margin," had absorbed hundreds of millions of banking capital in speculation. Moreover, this incumbering of current funds had taken place at a time when commercial and industrial expansion was multiplying its demands on our banks for credit accommodation. True, on May 9, 1901, an unexpected corner in Northern Pacific had brought speculation to a temporary standstill. But the quiet which followed had been utilized by the large banking interests to get together needed financial support with which to launch United States Steel and other new gigantic promotions. From two to three thousand millions of new issues had to be digested and assimilated by the investing public before our institutions of commercial credit could sufficiently relieve themselves from speculators' loans to meet the growing demands of trade.

After 1898 the financial situation was at all times pregnant with danger to business. So large was the proportion of new flotations carried on bank credit, that in the early months of 1902 conservative financiers became alarmed; serious question was raised as to what the outcome would be. The fear expressed was that the banking capital of the country was overloaded with credit obligations of a most dangerous sort. Within six years the national banks had increased their demand obligations to individual depositors more than $1,600,000,000, while during the same period their capital, both subscribed and earned, had increased only $135,000,000. That is to say, for every additional dollar put into the national banking business during this period, twelve dollars of credit in the form of new deposit accounts had been issued against it.

At the time that the national banks were thus extending their credit obligations similar expansion was taking place in the deposit obligations of state banks, private banks and trust companies. They

had increased their demand credit over $2,000,000,000 while the new capital added to the business was only $235,000,000, making a total expansion in deposit accounts of $3,600,000,000 with a total increase in capital of $370,000,000. The amount of credit expansion in bank accounts alone—*i. e.,* expansion in the form of cash with which business is done—was equal to about two and one-half times the total money circulation of the country outside of the reporting banks, while the total increase in banking capital was only about one-seventh of the money stock of the nation.

To the end of aiding the banks to meet increasing money demands, Secretary Gage had used the customary methods of relief. He had refunded the bonded debt on a lower investment basis; he had made numerous purchases of bonds for retirement; he had made interest payments in advance; he had added to the relief thus given by loaning to the banks some eighty millions of dollars, in the form of revenue deposits. Such was the situation when Mr. Shaw came to the cabinet.

The Credit Climax of 1902

Within the next few months pressure on the banks was something extraordinary. The climax was reached in September and October. Then it was that Mr. Shaw broke away from all precedents and issued his famous order that savings-bank investments be received as security collateral to additional revenue deposits. This first order was soon followed by another which relieved the banks from the necessity of holding a 25 per cent reserve against the secured deposits of the government. The effect of these two orders was to increase loans of the government to the banks from $113,000,000 to $166,000,000—producing a temporary result in financial circles much the same as if $50,000,000 of new capital had suddenly been added to the banking business.

During 1903 the financial stress of 1902 was gradually reduced. By concerted action of banks, by the continued aid of the government, by the imposition of high interest rates on bank accommodations and by demands for added collateral to margins forcing liquidation, the over-encumbered capital of banks in financial centers was again somewhat relieved. These acts of conservatism were followed by months of wholesome trading during which time speculation played the smaller part.

The latter part of 1904 and the years 1905 and 1906 were another period of dangerous credit expansion. During 1904 clearing-house transactions of the United States amounted to $102,000,000,000.00. The clearings for 1905 were $140,000,000,000.00. In the year 1906 they reached $157,000,000,000.00. December, 1906, was a month of high tension at the financial center to relieve which call-money sales were advanced to 36 per cent; the average of call rates for the month was about 14 per cent; third-day money commanded from 9 per cent to 15 per cent. During a few days of the January following, as high as 50 per cent was paid for call money. This was followed by two months of comparative quiet. In March, 1907, however, speculative trading and holdings on margin had again reached such proportions, that in efforts to protect themselves, the banks were forced to call and in a single day the market price of securities dropped from five to twenty points. General prosperity and prompt relief from Washington alone saved our commercial and industrial institutions from distress similar to that recently experienced through the sudden contraction of bank credit.

It was during this period, of rapidly increasing business activity and rapidly expanding bank credit and in anticipation of a sudden need for increased support to bank-credit obligations, that Secretary Shaw rendered another signal service to the country. He saw the approaching storm and prepared for it by getting the treasury in condition to come to the rescue of the country when the banks would be unable to meet obligations for payment without wholesale reduction of credit accommodation. In the first place payment on the Panama Canal purchase was made by withdrawal of the deposits of the government, diminishing by this amount the demand loans of the treasury to the banks and the consequent inducement to banking extravagance. After making the Panama settlement—to provide for which a 20 per cent call had been made—the treasury deposits were about the same as when Mr. Shaw had been appointed to the cabinet three years before. Further than this the Secretary gave notice to the banks that a call would be made, first, for 25 per cent and later for 50 per cent of the balance of government deposits, and although these demands were not enforced to the letter, by November, 1906, the demand obligations of the banks to the government were reduced to $50,000,000. Thus it

was that, by the time the banks in financial centers had again reached the danger point of credit expansion, Mr. Shaw was able to come to the support of the money market; and during the year 1906 and the early months of 1907, an added one hundred and twenty million of dollars in the form of additional deposits were loaned to the banks without embarrassing the treasury, enabling them to maintain their money reserves without seriously contracting business accommodations.

After the immediate need for collateral supports to the banks had passed, Secretary Cortelyou announced that he would follow the same general policy as had been pursued by his predecessor. But during the months from May to November the demand of the banks for money with which to maintain their reserves constantly increased. Protests were made against reducing the treasury balances that had been loaned to the banks to tide things over the stress which came earlier in the year.

Yielding to these importunities was a serious mistake. Instead of calling attention to the present capital weakness of the banks, the government permitted them to continue to use the large treasury balance without interest. The banks found that it was not necessary to increase their own capitalization; in fact, the government held out an inducement not to increase their capital, since the present stockholders were able to increase their income by the amount of the credit expansion supported by the treasury balance without being required to share the increased profit with new stockholders. Not only were the banks themselves weakened by continuing aid, but the government was placed in a position where it could not lend a strong helping hand in future emergencies.

The October and November Panic

When in October and November, 1907, panic days again were reached, the government at Washington could not respond with the liberality required. In May the $170,000,000 point had been reached. August 22 the amount had been reduced to $143,000,000. August 23 Secretary Cortelyou began increasing treasury deposits with banks. November 11 $70,000,000 had been added to the deposits, and during the month following practically the whole available surplus of the treasury had been loaned to the banks. But even this did not suffice to support the weight of obligations

that had been permitted to accumulate on the crumbling foundations of the banking institutions of the country.

The alternative to the banks was to force a violent credit contraction. The essential weakness, a first cause of credit collapse, is found in the changed relations of credit outstanding to capital supporting it. In 1897 the proportion of national-bank capital to individual deposit obligations had been as 1 to 2.93; in 1906 their proportions reached 1 to 5.03. In 1897 the proportion of national capital surplus and undivided profits to individual deposit obligations was as 1 to 1.92; in 1906 this proportion reached 1 to 2.79; in 1897 the proportion of money reserves held by national banks to individual deposit obligations was as 1 to 5.35; in 1906, even counting all the money borrowed by the banks from the government and from state and private banks and trust companies, this proportion had reached 1 to 6.71.

The institutions chartered by the government to supply credit accommodations to the business public had been permitted to grow top heavy. Worse than this: Not only was it permitted that they issue a dangerous proportion of demand credit to capital and money supporting it, but the character of commercial assets purchased by the banks by means of this credit was even more dangerous—a large part of the demand credit having been issued in exchange for paper secured by collateral which had been purchased "on margin," the market price of which was gradually depreciating. As fast as speculation prices depreciated the demands of bankers for additional collaterals became more tense. The net result was to force sales and to still further depress the market. When speculators reached their limit they made special pleas to the banks for "time," till the market might change.

The Capital Weakness of the Banking System Revealed by Commercial Demands from the Interior

The increasing demands from the commercial and industrial constituency of the vast interior forced the issue. When the country banks began to call the loans which they had made to the reserve banks, when the reserve banks, in turn, were forced to call their loans to the great central reserve banks that had used these loans for money reserves with which to support the credit accommodations to speculators, then it was that the mutual props in the

form of "legal reserves" began to give way and the whole business constituency which depended on bank credit for "cash" was thrown into a condition of distress. The resulting condition is what Mr. Ridgely refers to as the loss of confidence of banks in each other. To save themselves the central reserve city bank had to issue clearing-house certificates, which is another name for the suspension of specie payment. This protective measure of the central reserve banks forced the banks the country over to adopt the same expedient. Mutual obligations within each community were settled by means of clearing-house paper.

Relief finally came in the only way possible—through added capitalization. This capitalization, however, was only temporarily supplied. It was furnished by a syndicate of which the house of Morgan & Co. was the head. The government also added all of its remaining surplus available. A broader basis for credit liquidation was established through the importation of approximately $65,000,000 in gold, a large part of which was procured by means of this new temporary capitalization furnished by the syndicate. But the reduction of the demand credit used as "cash" in commerce and industry was far greater than any possibility either of importation or money issue could supply—a contraction of the credit circulating medium which resulted in reduction in prices, temporary receiverships and wholesale stagnation of business. Never has there been a more tragic financial situation. Only the general prosperity of the commercial and industrial world saved us from the worst of business calamities.

By the end of the year 1907 the credit stress was in a measure abated. This was in part due to importation and in part due to the largely decreased business demands, resulting from receiverships and liquidations, forced on by the sudden withdrawal of hundreds of millions of dollars of banking accommodations which had been previously extended to legitimate enterprises. The remedy applied was drastic, wrecking the fortunes of thousands of persons engaged in useful employment. But the fundamental weakness of the system still remains to be dealt with. If collapse may come at a future time less prosperous than the present, failing credit may work still greater havoc.

Dangers in the Present Readjustment

The present readjustment is essentially a dangerous one. Not only is the added capital a temporary support, but in its method of application dangerous. Practically the whole treasury surplus is tied up in the settlement. January 1, 1908, the banks were owing to the United States Treasury, either in the form of direct loans or as deposits of disbursing officers, about $256,000,000.00. A part of this the government needs at once to meet its current expenses. By a continued policy of loaning the treasury surplus to the banks without interest, by permitting the banks to retain a large part of the loan as money reserves for the support of obligations to depositors during time of credit expansion, by permitting the banks to find relief in added loans from the treasury and in a temporary syndicate a plan of reorganization is accepted which does not take care of the large floating debt and which does not provide adequate working capital. Another element of weakness is found in the fact that while the syndicate loans have a high rate of interest, the loans of the government are without interest. The syndicate loans, therefore, will be paid as rapidly as possible while the government will be further importuned not to reduce its balances.

In case it may happen that the country banks may again loan their reserves to the reserve banks, and the reserve banks may loan their reserves to the central reserve banks in sufficient amount, then the government may again be able gradually to call its loans. But with the first considerable pressure brought to bear on the system, the experiences of last May and of last November will be repeated. We may expect to suffer from alternating expansion and contraction, the one dangerous as a cause, the other dangerous as an effect, so long as the banks rely on borrowed money for their reserves. We may not expect the government to be in a position to protect the country against the unbalancing effects of sudden contractions so long as it places itself in the attitude of permitting the banks permanently to use the government surplus in lieu of adequate capitalization.

The government is now in a position such that one of three courses is open to it: (1) It may demand payment of loans to the banks with the possibility of disrupting the whole fabric of private credit based on the present reserve, (2) it may permit the

banks to use its fund without interest and borrow money at interest with which to meet its own current expenses, (3) it may, by charges of high rates of interest to the banks for loans in the form of deposit and bank notes issued on collaterals deposited, force the banks to add sufficient *permanent* capital to their business to enable them to meet all their present *emergency* capital obligations and at the same time insure the safety and stability of their own credit accounts. In this situation President Roosevelt has appealed to Congress urging that the last of the three courses be taken. His specific recommendation, however, is confined to note issues. It remains for someone in authority to seriously propose a measure which will effectively apply the same regulative principle to the loans of the government to the banks in the form of "deposits."

Within the first six weeks of the present Congress several bills were introduced which provide for an interest charge on these loans. In the House, Mr. Fowler (H. R. 12,677) and Mr. Keifer (H. R. 208) propose that banks be required to pay two per cent on government deposits. That such a measure would prove ineffective to cause banks to return government "deposits" after an emergency were past is amply proved by some forty years of experience with reserve loans. At such a rate banks have never been known to return reserve deposits until "called." In the Senate two bills have been introduced which aim to make "deposits" emergency loans, but whose defects are apparent. Senator Culberson (S. 3026) would have banks pay two per cent from August 1st to November 30th, four per cent from December 1st to March 31st, and six per cent from April 1st to July 31st each year. This proposal assumes that money demands and credit disturbances regularly follow the seasons, an assumption which might do much to produce expansion and contraction at the wrong time. The banker is in the best position to know when money demands are such that he can afford to pay six per cent for government loans, and these are times when the credit circulation should be increased or when more money is needed to support that already outstanding. Senator Platt's measure (S. 108) would make the rate discretionary. This might prove effective and without public danger if a minimum of about six per cent were established to insure the use of the government loans for purposes of steadying the market in time of extraordinary demand. If the banks had the opportunity of either

borrowing from the government on proper security at six per cent and the government had the option of supplying funds either in the form of gold or paper money to be issued by it, the money rate could never rise far above the established minimum. In such event there would be no limit to the possibilities of expanding credit when needed, except the limits of adequate security for the loans among prospective borrowers.

Our Hopeless Philosophy of Panics

Those who have expressed opinion concerning the cause of the recent panic use the same fatalistic philosophy as was employed centuries ago in accounting for ravages of "black death" and the scourges of small-pox and cholera. From time immemorial the same conclusions have been reached. After learned discussion those in position to command respect for knowledge of financial situations have each time announced that sudden collapses of bank credit have been due to an undefined, intangible, uncontrollable influence called "lack of confidence." Comptroller Ridgely, by process of induction, has given a new interpretation to this vague theory by asserting that the conditions which led to the panic of last October and last November were due "not to lack of confidence of the people in the banks, but more to lack of confidence of the banks in each other."

With such a diagnosis of the malady by those who are looked to professionally for the prescription of remedies, question may be raised as to whether we may ever hope to find relief from financial ills. May we hope to correct a financial disease that is diagnosed as the result of a mental attitude of persons who may not be located and specifically treated? Congress is asked to pass remedial laws. What legislation will make business safe as against "what some people may think?" How may bankers be required to conduct their business to prevent "some people" from losing confidence? Does not such an analysis suggest that the philosophy of banking is still surrounded by the ignorance and mysticism of the dark ages, and that public inquiry is still lacking in method of scientific research?

Time was when a landslide was attributed to the mental attitude of an evil one; when the breaking of a bridge or the falling of a building was considered as the inscrutable act of some great

destroying force. The remedy proposed for such calamity is similar to that at present urged to relieve business, viz., self-sacrifice and prayer as a means of restoring lost faith in an influence for good—a belief which has the power to protect the public against the intrigues of the devil. Since the days of the South Sea Bubble this same mystically vague remedy has been proposed for protection against the collapse of bank credit. Let us have confidence! Restore our faith and we shall be saved!

A Plea for a Scientific Method of Determining the Character of Banking Legislation Needed to Protect the Public from Panic

In search for causes of structural collapse we have come to apply scientific standards to judgment. Were the tower of the capitol building to show signs of weakness during a storm the government would not rest content to set up props till the storm had abated. Were a great office building of New York to fall, no one would think of the prayer of faith as protection against future evils, to be suffered from collapses of similar kind, or of importuning Omnipotence for justice to those responsible for loss of life and property. Inquest would immediately go to the character of materials and workmanship used in construction. Neither would there be mystery or fatalistic philosophy woven about legislation proposed for future safeguards to the community; nor would it be accepted as a satisfactory defense of building management that those in control had yielded to the importunities of persons wishing accommodation and as a consequence the building had been built too high or had been overcrowded, or had had a run on it that carried it and its tenants to destruction. If the structure had been used for purposes other than those approved, or if the owners had connived with officials, or if officers of the law had permitted the superstructure to be carried beyond the point of safety, if the foundation had been overloaded and had crumbled beneath the weight, or if a superstructure had been erected of such physical parts as to endanger tenants or the public, under any and all of these circumstances, tenets of scientific inquiry, premised on experience, would guide in determining responsibility for loss, as well as in the shaping of legislation for the correction of similar evils in other structures built or to be built.

In engineering and architecture, as well as in building ordin-

ances, the guiding principle is: The greatest economy in construction that is compatible with safety. Whatever the cost, foundation and materials must be of such strength and quality as to make the structure safe. In estimating the depth and breadth of foundation, or the strength of materials to be used in any part of a building, a liberal margin of safety is allowed to provide for strain greater than any that may ever be brought to bear.

Should a bridge be under contemplation, then calculations as to the load or strain would depend on the character of use. After the bridge was completed traffic regulations would be framed to protect the public from danger of overloading, and the management would be held liable for violations. Police control would also be exercised to prevent catastrophe. Much of the legislation proposed to prevent collapses of bank credit throws this kind of reasoning to the winds. The drift of opinion has been away from the theory of a coefficient of safety. The banking world is urged by public officials to make a still higher use of structural materials, *i. e.*, to make such adjustments between themselves as will permit the same capital to carry a larger load. No attempt has been made to calculate what burden a particular credit structure may bear without endangering the business public from credit contraction. The argument has been to further reduce the capital cost of banking. In estimating this no account has been taken of the cost to the community of the periodical wholesale demolitions, and the wrecking of other business which have been induced by the banks to depend on them for current funds. The banks may be safe. Yes. But what of those many business interests that have come to rely on bank credit for "cash?" There seems to be an utter blindness to the public aspects of banking; no reckoning is taken of the fact that the forced contraction of credit of even the smallest of banks may cause greater loss and suffering to a community as a whole than would the collapse of the largest of physical structures.

In the safety of a building structure the public is interested as a matter of physical protection to tenants and passers-by. Increased charges for rent, due to the capital cost required to obtain this protection, is not accepted as reason for permission to build an unsafe edifice. At any and every cost public safety is insisted upon. In the safety of a bank it is not physical safety alone that is involved. The business, the fortunes, possibly the lives, of all those

who have made arrangements for their current financial needs are directly at stake. Indirectly, a sudden contraction of bank credit to protect the bank itself from collapse may unsettle well-founded business judgments, and produce conditions which may cause business concerns, not in any manner connected with the particular institution which institutes the measure, to topple to ruin. Indirectly, the business interests of a whole community or of a nation may be affected.

Is it not worth our while to proceed in the determination of questions of banking regulation, on the theory that no capital cost is too great if it is necessary to protect the community against sudden contractions of bank credit? May not the same principle of scientific inquiry be applied to the discovery of a margin of safety to prevent collapses of credit, as has been applied to building structures? Of far greater importance to the welfare of the community is it that bank credit shall not be constricted in time of need; of far greater importance that the capital foundation shall be adequate to support every dollar of credit issued by banks, so long as this credit may be needed by the borrower; of far greater importance that a liberal margin of safety shall be required as against extraordinary strain. Would it not seem the part of wisdom for public men and public bodies to pass laws to prevent the overloading of the capital foundations of credit institutions, and overaccommodation rather than that the government shall be content to permit banks to extend their credit *ad libitum?* Is not legislation which requires a bank to do a safe business preferable to the administration of palliatives to the injured, or reliance in the ability of the treasury to prevent disaster by running to the support of toppling credit walls as a means of relieving financial institutions from the necessity of increasing the capital cost of doing business?

Elements of Certainty in the Problem of Elasticity

In this relation it is suggested that banking and credit are just as susceptible to scientific analysis as are buildings and building materials. With all the mystery that has been woven about the subject, every feature and element in the problem of elasticity of bank credit is as capable of exact determination as are the tensile strength of iron, the crushing resistance of stone, or the wind strain on an office building.

In law there is none of the mysticism about credit which is commonly assigned. Credit is an unconditional contract for the payment of money, nothing more, nothing less. So clear is the law on this point that it has been repeatedly decided that any other form of contract or transaction is not credit. In business practice there is absolutely no uncertainty about what credit is. Every business man knows that if he be creditor he can insist on the payment of the amount and kind of money contracted for, and that nothing else may be substituted except by his consent, which amounts to a new contract. If he be debtor he knows quite as well that he must obtain and deliver the money in the amount and at the time contracted for, or in default of such delivery the courts may be asked to intervene and sell his entire estate if need be to procure this money. In the common parlance of the street, credit is a "short sale" of money; this sale is governed by practically the same rules as a "short sale" of bonds or a short sale of wheat. The only alternative to "delivery" is "settlement," or the substitution of a new contract for the original contract of credit.

There is nothing mysterious about bank credit. This is a contract entered into by a banker with his customer, called a depositor, or (in case the bank may be permitted by law to issue) with the holder of the banker's note. The contract is one for the delivery of a definite amount of legal tender money on demand; if the creditor of the banker be a depositor then the evidence of the credit contract is a memorandum of account on the books of the bank and a corresponding memoranda kept by the customer in his own cash book. It is a common credit relation—there is no uncertainty about it. It is identically the same kind of a contractual relation as is a demand credit evidenced by an account on the books of a manufacturer. On discussing the question of bank credit, therefore, we may speak in exact terms without any cavil or misunderstanding.

The mysterious word "confidence" may also be resolved into exact terms. Analyzed to its constituent elements, what has been so vaguely spoken of as "confidence" may be clearly defined. In banking relations that which has been called confidence is a conclusion or judgment arrived at with respect to the value of a credit contract at the time that the contract is made, or a subsequent judgment which reflects itself in the exercise of the option under the

contract to demand payment. To illustrate: A merchant takes in $1,000.00 in legal-tender money over his counter. He carries this money to a nearby bank and exchanges it for a credit of $1,000.00, a memorandum of which is entered in his pass-book, as well as the customers' ledger of the bank. The merchant does this because, at the time he makes his "deposit," it is his best judgment that he would rather have the obligation of the bank to pay him $1,000.00 on demand than to have $1,000.00 in lawful money. If this were not his best judgment he would not have made the exchange. "Confidence" in the bank means that, for his own purposes he values $1,000.00 of unsecured credit of this particular institution more highly than he values $1,000.00 of gold coin of the United States or other currency.

The reason why the merchant has "confidence" in the bank is just as susceptible of analysis as is the definition of what constitutes "confidence." Why does he value the contract of the bank to deliver money at a future date more highly than money itself? The customary answer shows the inconclusiveness of the present method of approach. We are vaguely told that it is because the merchant has "confidence." That is to say, the merchant has "confidence" because he has "confidence," and conversely he does not have "confidence" because he does not have "confidence." Upon analysis it is found that the merchant's judgment as to the value of the bank's credit is premised on three other conclusions: (1) That "the banker is honest"—which being interpreted means that, in the opinion of the merchant, the banker will do all in his power to meet his credit contracts on demand without resort being had to the court to enforce them; (2) that, in the opinion of the merchant, the banker is conducting his business in such manner that he will be able to fulfil every promise made by him to deliver money on demand according to the terms of his contracts; (3) that, in the opinion of the merchant, all persons with whom he currently deals have, or will have, also arrived at the same conclusions as has he with respect to this particular banker.

Elements of Danger and Uncertainty

It is in facts and conditions which warrant or fail to warrant the second of these conclusions that the chief element of public danger lies. Small loss has been suffered from mistaken judgments

in arriving at the first conclusion—the honesty of bankers. Reputation for honesty is brought to a test with each transaction. A single transaction which shows dishonesty will destroy all possibility of further sales of credit—in other words, will destroy the business of the banker. Dishonesty eliminates itself from the banking business. For protection against dishonesty little or no legislation is needed. Neither can legislation be made effective with respect to the third conclusion. Legislation cannot compel a trading public to accept the credit of any particular institution or class of institutions in exchange. It is with the second conclusion only that laws may effectively deal, and in the character of dealing with this lies the whole problem of elasticity and the safety of our financial system. The conditions under which the banker is permitted to offer his credit for sale, the manner in which he shall conduct his business, the amount of capital required, the character of equipments in which his capital shall be invested, the amount of obligations to depositors that he will be permitted to incur to each dollar of capital invested in the business, the amount of minimum cash reserve required, the conditions under which he will be permitted to loan to and borrow from other banking institutions, the conditions under which he will be permitted to obtain aid from the government, the character of business to which he will be permitted to extend credit, the character of assets he will be permitted to buy in exchange for demand credit, every phase and aspect of his business which enters into the customer's judgment as to ability to pay, are subject to the most exacting regulation and critical current examination of public officers.

It is also to factors of this class that every question having reference to panics, runs, collapses of credit, credit expansion, credit contraction, and increased and decreased demand for money relates itself. These factors are also subject of record and current report and may be classified and summarized for purposes of exact determination of elements of strength and weakness, of safety and public danger. Not only may instruments of precision be used in the diagnosis, but each remedial reagent may be scientifically tested in its application.

The True Function of a Bank

Critical analysis and regulative measures must have reference to the function and purpose of the commercial bank. This factor of the problem also leaves no room for uncertainty. The business of a commercial bank is essentially the business of selling its own credit for the money and commercial paper offered in exchange for the kind of "cash" which it created. The high value set on the economy of bank credit as "cash" for use in the making of purchases and payments, has caused business men to take nearly all the money and commercial paper received by them in their own business to the bank, and to offer them in exchange for the bank's credit accounts. The check and the draft are simply the instruments by which the bank's customers demand payment, or transfer certain portions of their bank credit to others—these transfers being accepted in lieu of money. Selling stocks and bonds, underwriting the purchase and sale of corporate issues, collecting the purchase and sale of coin and bullion, are not banking. They may be incidents or accessories to the business, but any one or all of these functions may be exercised by those who have no powers to engage in the business of banking.

From the point of view of ability to pay demand obligations, money is the only equipment needed by a bank. With the question of profit eliminated the only form in which a bank need carry either capital or deposits would be legal-tender money. From the point of view of making a profit, and at the same time of conserving its money-paying ability when money is demanded, the banker seeks to keep all his capital, as well as the money received in exchange for his credit, invested in income-producing assets, which are readily converted into cash when needed. If the capital of the bank alone were held in reserve for the meeting of demands for money, the business of the bank would be to exchange its own credit for money and other cash assets, and to exchange these for commercial paper, etc., bearing an attractive rate of interest. Were the entire capital not currently needed as money reserves, then the portion not currently needed might be invested in such manner that the investments might at all times be converted into money without loss, and without waiting for maturities. So considered, the business of banking has two distinct sides, viz., a credit-trading side and an investment side.

What Amount of Capital Is Required to Make a Bank Safe

Accepting the only logical definition of capital, viz., funds or property contributed by shareholders or other proprietors, for the purpose of providing an enterprise with the resources or equipment permanently or continuously necessary to the safe and successful operation of the business, and again we are on scientific ground. Again the problem of elasticity lends itself to exact analysis. The profits of a bank as such are derived from sales of its credit. The amount of its banking profit depends on the amount of credit it can exchange for money and other cash or income-producing assets—or, to use the parlance of bankers, on the amount of its "deposits." The equipment necessary to the highest success of a bank is such an amount of money held in reserve as is necessary to meet demands for payment on all the credit which it is able to sell; or, again, to use the parlance of bankers, a money reserve large enough to meet the demands of depositors. The amount of capital needed by a bank, therefore, is such amount as is necessary to provide it with its office equipment and with an adequate money reserve. If the capital of a bank is not sufficient to do this with safety, it is under-capitalized. In such circumstances the bank would be in much the same situation as a railroad that is carrying a part of its construction on floating debt, or a manufacturer who has supplied himself with machinery by means of demand loans. If his current loans are called he must sacrifice some of his product or current business to meet them and possibly be forced to sell his plant also.

This does not mean that a bank which does not capitalize all its equipment, including its money reserves, is in danger of insolvency. A bank as well as a manufacturer may at all times be solvent, and may so conduct its business as to meet every credit obligation without a dollar of capital. If it rent its banking room and furnishings, if it invest its credit in money or other assets that may be quickly converted into money without loss, it may meet all obligations, provided the income on its loans is sufficient to pay expenses. But such a bank is in a position at any time to lose its business by being forced into liquidation. In other words, it cannot fall back on a capital fund to protect its deposit obligations, and, therefore, as was the case with many institutions in the recent panic,

it may lose its depositors while other institutions that are able to protect all credit obligations without forcing loans will get them.

What Is the Public Interest in Bank Capitalization?

The bank is not the only one to suffer from lack of capitalization. The customer is vitally interested, so vitally interested that the bank always makes a point of advertising the amount of its capital as an inducement to the customer to buy. The public, as a whole, is interested, for the further reason that banking capitalization is one of the prime factors in elasticity; both of the volume of money and of credit. Public interest in the capital equipment, therefore, may be said to be twofold:

(1) *Each individual is interested in the bank as an institution chartered to provide a convenient form of "cash."* The one who sells his note or his money to a bank in exchange for its deposit obligations does so by reason of his desire to provide himself with the current funds, in convenient form needed for his immediate uses. In establishing a banking relation he desires to deal with an institution that can safely sell sufficient credit to meet his current financial wants. For the same reason, it is his desire also to deal with a bank that at all times is able to maintain the account which he has contracted for without calling his loan or diminishing his accommodation, so long as accommodation is needed, provided he has good commercial paper to offer in exchange.

(2) *The public at large is interested in the manner in which banks are managed on account of the effect which a rapidly increasing and decreasing volume of available "cash" has on prices.* By reason of the medium of exchange being so largely in the form of bank credit instead of money, the country at large, or the combined business interests of the community and of the nation, demand that there shall not be an expansion of bank credit which cannot be supported so long as the current funding need which created the credit is present, and conversely, that there shall not be sudden contractions in the medium of exchange brought about by efforts of banks endeavoring to convert accommodations to customers into money to enable them to make deliveries on deposit obligations.

It is such a condition as this that prevails in time of panic, and these are the conditions that should be met by adequate and safe capitalization. By application of methods of research, it is entirely

possible to know whether the past emergencies could have been met if the banks of the United States had been required by law to capitalize their equipment, including their legal reserves; we would also be able to reach a scientific conclusion as to whether much of the present danger might be avoided if banking reserves were not tied up in loans to speculators "on margin."

Conclusions That Have Been Reached as a Result of Experience

As a result of the experiences of the last few decades, and of reflection on the numerous collapses suffered in institutional credit, certain conclusions have been reached that may be said to be generally accepted. These are as follows:

(1) That some provision should be made for increasing the elasticity of our currency, as well as for increasing the elasticity of bank credit.

(2) That the present law which permits the issue of bank notes was framed for the purpose of stimulating a favorable market for government bonds, and that in framing the National Bank Act no thought was had to giving elasticity, either to the currency or to bank credit.

(3) That the means employed by the government for encouraging the banks to invest in government bonds (viz., permitting them to hypothecate the bonds purchased for their par value in notes, without the payment of interest on such notes sufficient to keep them out of circulation in time when they are not needed) encourages the banks to encumber their capital to such an extent that they are unable to obtain notes from the government when needed.

(4) That the frequent and destructive panics and periods of money stringency from which business has suffered have in every instance been related to banks; that, in each stringency, the dominant demand has been a demand for money which the banks are unable to supply except at the expense of a very great contraction of commercial credit.

(5) That under the operation of the present law the only effective relief which may be given by the government to relieve money demands on the banks is through treasury "deposits."

(6) That the National Bank Act and the several state acts are defective in that they permit all the banks outside of the central reserve cities to loan their "legal reserves" and still count these

loans as reserves for meeting obligations to pay depositors, the effect of which has been, not only to permit the banks to unduly expand their credits, but, also, to make a large part of the money and credit of reserve institutions available for speculation only, thus encouraging "margin trading," during periods of low interest rates, unsettling the investment markets and endangering the whole system of commercial credits, for the protection of which the reserves are created.

Neglected Aspects of the Currency and Banking Question

While there is practical unanimity of opinion with respect to the subjects above enumerated, banking opinion has scarcely gone further than to conclude that something is wrong. Experience, especially our recent experience, points to other aspects of the currency and banking situation that have been entirely overlooked or seldom referred to in discussion. Before constructive legislation may be intelligently enacted, the following questions must be answered:

1. *What amount of elasticity must be provided for?*

The question has a double bearing, and suggests inquiry with respect to two aspects of the financial situation: (*a*) What is the variation in the business demand for money, and (*b*) what is the amount of elasticity in bank credit required to meet legitimate business demands? That no serious attempt has been made by legislators even to approximate a scientific conclusion appears from bills now pending. The limits to be placed on issue powers of banks range from $250,000,000 to not less than $2,000,000,000.

2. *What kind of protection is needed?*

A large number of bills have been brought forward at Washington to the end that the deposit obligations of banks may be insured. That this element of protection is seriously contemplated is shown by the large proportion of all the banking bills containing such provisions and the broad representation and high standing of their authors. Among them may be named Senators Raynor, Culberson, Brown, Nelson, Curtis, Gore, Scott, and Owen, and Representative Fowler. Deposit insurance will doubtless be forced by state legislation, if not by the federal law. But assuming that the deposit obligations of banks had been fully insured, would this have materially relieved business distress during the recent panic?

Assuming the average time of bank credit accommodation to be sixty days, the actuarial risk of loss amounts to about 1-120 of one per cent. Do stability of business and sane judgment require legal protection against loss from insolvency of banks so much as legal protection against the violent and dangerous expansions and contractions of bank credit? Are not the direct losses to depositors negligibly small as compared with the disasters which follow the efforts of banks to obtain money with which to protect themselves from insolvency, or from inability to maintain their own credit accounts when demand is made by other banks for settlement of balances?

3. *What are the influences which bring about dangerous expansions in credit?*

From 1904 to 1906 the expansion in deposit obligations of commercial banks of the United States amounted to about $2,000,000,000. This was the amount by which this form of cash was increased within the two years immediately before the present stress for money became seriously felt. It is not suggested that any danger lies in the mere fact of expansion, but it is now a matter of experience that this particular expansion was dangerous. It is also a matter of history that the havoc wrought by every panic that has occurred during the last half century has been the result of the contraction of a dangerous expansion of bank credit. Looking toward a proper appreciation of the influences which bring about expansion, the following questions seem pertinent. In time of financial ease, has it not been the constant effort of banks to increase their demand obligations to depositors without any regard whatever to their own capitalization? As a means to this end, and at the same time keeping within the money reserve requirements, have not the national banks in reserve cities offered interest and every known inducement to other institutions for money loans which might be carried as reserves to support a credit expansion that ultimately became dangerous?

4. *What are the incidents to credit contraction?*

Without adverting to the results of contraction of credit so disastrously felt and heroically met by the business community, the recent panic suggests the following specific inquiry. Is the financial problem which confronts the community in time of panic pri-

marily a currency question, or is it essentially one of the inability of banks to maintain a volume of credit which they had previously issued to merchants and manufacturers for use as cash in their current business? Is it not the purpose of these issues of credit to increase the profits of the bank? Have not a large part of the reserves which have been held by banks to support these increased credit issues been borrowed from other banks, instead of being provided for by capitalization? Have not money stringencies been largely due to demands created by these banks for the payment of reserve loans as a means of protecting their own customers' accounts? In these several relations the following statement of facts taken from the report of the comptroller is illuminating:

Banks.	Individual Deposits.	Money Reserves.	Percentage of Money Reserves to Deposit.	Money borrowed from Banks and the U. S. Treasury
Savings Banks	$3,495,410,087	$28,666,882	.008	$ 8,179,275
Loan and Trust Companies	2,061,623,035	104,258,066	.050	167,872,759
State Banks	3,068,649,860	254,001,570	.083	211,007,202
National Banks	4,319,035,402	701,623,532	.162	1,738,775,664
Private Banks	151,072,225	8,710,484	.058	2,844,638
	$13,095,790,609	$1,097,260,534	.084	$2,128,679,538

There are two bills now before Congress which make a clean breast of the reserve loan practice. Senator Culberson (S. 3027) would have "every national bank . . . keep on hand in its own vaults the reserve of lawful money provided by law." Senator Heyburn (S. 3044) would require that when a bank shall permit its money reserve to fall below 20 per cent it "shall not increase its liabilities by making new loans other than by discounting or purchasing bills of exchange payable at sight," and would also during such period forbid the payment of dividends. These measures would seem to be weak at two important points, viz., (1) they do not provide for the investment of reserves and the use of these investments as security for government loans or issues; (2) they do not attempt to co-ordinate reserves with capitalization, *i. e.*, under either measure the money reserves may be borrowed money.

5. *What would be the effect of the capitalization of legal reserve requirements?*

To know what amount of capital would be required to provide

for redemption equipment equal to the amount of the legal reserves required of banks (after taking out of the capital and surplus such unavailable assets as the cost of banking houses, real estate and the margins on securities deposited as collateral for issues, government deposits, bonds borrowed and other secured loans, and also after providing for the necessary working balances to provide for exchanges in other cities) would require a special inquiry on the part of the comptroller of the currency. As nearly as may be approximated, without an official inquiry, such a provision of law would add not far from $500,000,000 to the capital of national banks, as a prerequisite to incurring their present deposit obligations, and, if applied to state institutions as well, would add not far from $1,000,000,000 to the total bank capital of the country. Whatever might be the amount, would not this added capital contribute materially to give increased stability to business and increased elasticity to bank credit? Even though it add to the capital cost of bank credit, would it not be an economy to the business world? Presumably some such result was in the mind of Senator Owen when he introduced his bill (S. 3987) by which he would forbid a national bank from incurring deposit obligations in excess of ten times its capital and surplus. He would also limit speculative loans to the amount of a bank's capital and surplus (S. 3986). In view of the known facts, however, these measures would be of no practical effect. The ratio of capitalization to deposit obligations has been reduced two-fifths since 1896. Should not immediate steps be taken to make the foundation of our credit safe, and provide for adequate expansion without endangering the public?

6. *Is it either safe or expedient to have a large volume of bank notes permanently outstanding?*

For two decades the banking interests fought against the continued use of greenbacks. The result of the agitation was a compromise limiting the form of credit money to $346,000,000. During the last few years the bank note circulation permanently outstanding has been increased over $400,000,000. In this relation the question may be raised as to whether Gresham's law does not operate on permanent issues of bank notes as well as on greenbacks. Have we not in recent legislation and practice with respect to bank notes employed a form of money that is cheaper to the banks than greenbacks? Have we not in the volume of bank notes permanently

outstanding a monetary device more dangerous than greenbacks, for the reason that they not only drive gold and silver out of the country, but at the same time encumber the banking capital, by means of which gold and silver might be brought into the country when such a need is felt. In the legislation now before Congress few measures have any regard for this situation. The bills of Senators Knox (S. 1239), Raynor (S. 2954), Aldrich (S. 3023), and Owen (S. 3988) follow the recommendation of the President, viz., that the bank note currency should be taxed sufficiently to make it an emergency currency. Senator Knox would tax all issues secured by United States bonds at five per cent and all issues having other collateral security seven per cent. This is subject to the criticism that such a tax imposed, without refunding the national debt, would at once operate to reduce the price of United States bonds, and therefore would amount to confiscation of the premium. Senator Aldrich has met this moral question by providing that the tax on issues against United States bonds remain practically as at present, but would impose a tax of six per cent on all other issues. His measure, however, becomes practically ineffective in that it makes no provision reducing the permanent bank note circulation; in fact, by the terms of his bill, the permanent note circulation might be increased, and it specifically provides that all banks may thus encumber 50 per cent of their capital and surplus. Senators Raynor and Owen would impose six per cent during the first four months of issue and eight per cent thereafter, permitting any security to be accepted that may be approved by the Secretary of the Treasury.

7. *Should government funds be used to give more than temporary relief?*

In this relation it is to be conceded that bank notes are nothing more nor less than loans of government money to the banks without interest. The government loans unsigned notes to the bank for issue in exchange for a collaterally secured obligation of like amount to the government. Unquestionably government "deposits" stand in the category of collateral loans without interest. Having this fact in mind, the question is fairly presented: when business interests are endangered by reason of the inability of banks to maintain the volume of credit needed, should government loans be looked to to give more than temporary relief? Do not loans by the gov-

ernment without interest, or at a low interest rate, cause the banks to rely on "deposits" instead of their own capital? Will not such a practice cause the banks to retain these loans when not needed, unless the government arbitrarily enforces payment against their wishes? Do not deposits, without a rate of interest which will cause the banks to repay the loans as soon as an emergency is passed, leave the whole situation subject to the discretion of public officials, instead of making regulation automatic? Does not a large volume of government deposits or loans without interest to the banks, weaken instead of strengthen the credit situation, and leave the banks without the possibility of obtaining collateral aid when a new emergency arises?

8. *Is a "great central bank" a better institution to give collateral support to our banks than the treasury?*

The large bank idea has taken two distinct forms, one as expressed in Senator Hansborough's bill (S. 547), giving to an institution controlled by other banks the widest banking powers, both of loan and deposit, and the other as expressed in Congressman Frones' bill (H. R. 13,845), giving to a government controlled institution, with capital of $100,000,000, powers of issue only—all issues over $100,000,000 to be taxed on a graduated scale of from six per cent to ten per cent per annum, thus making the issues in excess of capital an emergency circulation. Assuming that a large permanent issue of bank notes is not a good business expedient, and narrowing this part of the problem down to a choice between a great bank and the United States Treasury, in case the funds of the United States Treasury were not permanently loaned to banks, may not the United States Treasury do all that it would be safe for a great central bank to do? In case the funds of the government were loaned or deposited with a central bank, would they not operate on the financial system in the same manner as if loaned to other banks? Having in mind the arguments of prominent bankers, the further question may be asked: Does the cumulation of a treasury surplus operate to deprive the business of the country of the use of money held by the government, or is this surplus drawn from the money stock of the world, thus increasing the money stock of the United States? If the conclusion is reached that it does operate to increase the money stock of the United States, with adequate money reserves maintained by the banks, may not a

treasury surplus be held with advantage as an emergency fund for any use to which it might be applied, thus placing the United States in a stronger position financially than any other nation—a situation which might go far to relieve this country from the incidents of falling markets and failing credit abroad? Would not legislation which would permanently encumber or tend to encumber the government surplus or lower the capital strength of the banks, operate to make this country still more dependent on foreign states, and to relinquish a financial advantage which by nature and trade position it enjoys?

What the Federal Government May Do to Correct the Evils of State Banking Legislation

One of the prime elements of weakness in our credit situation—one that has done much to unsettle business and cause violent expansions and contractions of credit—has been the laws of states permitting banks and trust companies to organize and do business without adequate capitalization, or even the indirect restraint on over issues of credit imposed through reserve requirements. Among the worst institutional offenders have been trust companies. These corporations have been strictly controlled so far as the initial capital security given to trust estates and trust obligations are concerned, but in their banking and common credit relations they have so conducted themselves as to rank them with institutions that, in 1837, would have been called "wildcat" banks. That is to say, their capital has been largely for the protection of trusts; they have also been permitted to do a banking business; for this banking business no separate or extra capitalization has been required; having their capital largely tied up in security deposits with state authorities, they have been permitted to incur obligations to depositors without even the money-reserve requirements imposed on state banks; when similar money reserves are required, they have been permitted to borrow them instead of being required to furnish them out of their own capital; in fact the laws specifically permit a portion to be in the form of loans to other institutions, enabling them to carry mutual loans in lieu of money reserves, a fault which attaches to state banks as well as to trust companies. They have also been permitted to engage in underwriting and other practices,

from which national banking institutions, on grounds of public policy, have been debarred.

The net result of such privileges has been:

(1) To force on national banks larger capital cost than is required of state institutions.

(2) To enable the state banks and trust companies to offer to customers interest on their own deposit obligations as an inducement to purchase their credit, in some instances as high as 4 or 5 per cent being paid on their deposit liabilities.

(3) While they are thus stealing the customers of national banks they have been in a position to force them to carry the money reserves on which the trust companies relied in time of emergency to support their own credit.

By reason of these laws and the more favorable conditions for profitable employment of capital, the state banks and trust companies have been making large inroads on the business of national banks. The following summary of individual deposits from New York City and Brooklyn is taken from the last report of the Comptroller of the Currency:

Banks.	Individual deposits. 1906. Millions.	1907. Millions.	Increase. Millions.	Decrease. Millions.
National banks	653.3	600.8	....	52.5
State banks	323.7	336.9	13.2	....
Savings banks	925.1	962.6	37.5	....
Loan trust companies	790.8	840.4	58.6	....
	2,692.9		109.3	

While the state institutions have been gradually taking the business of national banks, two-thirds of the entire money reserves are carried by national banks:

Banks	Money Reserves 1906. Millions.	Money Reserves 1907. Millions.
National banks	227.5	234.6
State banks	54.6	65.9
Savings banks	6.4	6.4
Loan trust companies	33.4	56.8

The wisdom of attempting to directly control the banking legislation of states may be questioned. There can be no question,

however, about the wisdom of making conditions so favorable to national banks which are doing business in a manner to protect the community that they can succeed. To this end, one of the points of attack would be the present reserve law; another would be to refuse to permit a national bank to receive deposits or in any manner to become directly indebted to or to do other than a collection business with an institution having inferior capital requirements; again, by permitting national banks to increase their circulation on collateral security *ad libitum*, as well as to procure collateral loans from the United States Treasury in the form of deposits, upon the payment of 5 or 6 per cent, the credit accounts to customers of national banking institutions might always be protected. If state banks and trust companies were required to carry their own reserves, do their own clearing, support their own credit, and the collateral aid of the United States Treasury were limited to the national banking system, both the national bank customer and the bank itself would soon recognize the advantage of compliance with laws for the safe conduct of business.

THE LESSONS OF THE PANIC OF 1907

By S. Wexler,
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Notwithstanding the fact that panics have occurred in nearly every decade of this century, in some one or more of the great commercial countries of the world, all due more or less to the same primary causes, and that volumes have been written for the enlightenment of future generations setting forth the causes and lessons of each crisis as it occurred, the financial convulsion of 1907 proves that the lesson must be constantly relearned and that the human will is too weak to resist the impelling greed for wealth and ambition for commercial power. Every effort, therefore, to teach the lessons of the panic of 1907 should be eagerly grasped in the hope, however illusive, that it may point out to future generations of business men the dangerous currents that lead to disaster, and how to avoid them.

Much of our trouble has been caused by the blind worship by the lesser lights of the great commercial and financial luminaries. Men famed for wealth, however acquired, in charge of the great financial organizations, have allowed their names to serve as the loadstone to draw the small investor into innumerable unsound financial schemes which, had he carefully investigated as he does matters pertaining to his own business, he would have scrupulously avoided. The small investor may, therefore, learn that however attractive the prospectus, however alluring the promised profit, however great and high the promoter, his own careful investigation and the application of his own sound business judgment must be the only safe guide to his investment.

The promoter should learn from this panic that he must be classed either as an honest architect of sound financial plans or an ordinary grafter, and that there is a field for the wise and foreseeing student of conditions and opportunities, which he can honestly make attractive to investors, while for the unscrupulous promoter of get-rich-quick concerns, the dishonest predator upon innocent wealth, there yawns the jail or the suicide's grave.

In this connection the press, through the medium of which nearly all great undertakings are advertised, may also learn its lesson. Many of our most prominent newspapers have, for money payments, been accessory to the frauds which have been perpetrated upon the public. They have advertised mining companies whose sole possessions consist of a hole in the ground in some remote district in the West, and a sumptuous office in the neighborhood of Wall Street, stocked with clippings inspired and paid for, which they widely disseminate among the public. The proper functions of a newspaper, viz., the education of the people and the molding of public opinion in legitimate channels, seem to have been forgotten in the mad rush to increase circulation and dividends, and many sheets made famous by their great founders, to-day publish anything for which pay is received, or which will make the paper sell.

These newspapers thus become *particeps criminis* to many of the wind-inflated schemes, the bursting of which, with their consequent losses has helped to destroy confidence. While the freedom of the press is guaranteed under our constitution and is a most valuable safeguard of our public liberty, papers publishing dishonest financial schemes, sure-thing racing tips, injurious patent-medicine advertisements, the claims of indecent and fake medical practitioners, etc., should be just as much subject to fine or suppression, and their owners to imprisonment, as the individual who steers the innocent into a gambling den.

The merchant who has expanded his business upon the liberal credits proffered by note brokers, to such an extent that he has looked upon such borrowed money as a part of his capital, has suffered likewise during these strenuous times, and he can well and profitably learn that unwieldy stocks of goods and too liberal lines of credit in times of great business activity, may become the boomerang of disaster in the kaleidoscopic changes which our affairs frequently undergo. He should also learn that his capital should be kept liquid and in his business, and not invested in the stocks of other companies, which cannot be converted into cash when needed, nor used as collateral for credit.

The manufacturer has been a party to the mistake of the merchant, in overselling his output, delaying shipments in the season when the goods might be sold and forcing the merchants to antici-

pate their wants long in advance of any certainty of proportionate demand. The cancellation of orders he is compelled to accept and the shutting down of his mills may well teach the folly and unfairness of this course. The manufacturer may also learn that the enlargement of plants, the installation of new machinery on borrowed money, is a dangerous practice and that, though with apparent success, he is building upon a foundation of sand.

The banker has also his lesson to learn, from the occurrences of the past few months. He must know that the man entrusted with the liquid capital of the nation and with the savings of the multitude, should not be a gambler or speculator in real estate and stocks. He must know that the funds entrusted to him are as sacred from his own depredations as from the cracksman who blows his vaults. He should see clearly that he must choose his profession, and that if it be that of a banker in a state or national institution, he must disassociate himself from speculation and schemes, and devote his entire time, thought and energy to the interests he has sworn to conserve. The contrary course pursued in a few instances, in New York and elsewhere, has done much to destroy confidence and has caused the extraordinary hoarding of money, resulting in the panic of 1907.

The public servants, such as the railroads, steamship lines, trolley companies, etc., must have learned ere we reached the acute stage of this panic, that the people cannot "be damned," that monopoly, though in the nature of things an incident to their franchises, cannot disregard the life and comfort of the public, that in future they must not wait to be forced to treat the public fairly, but must meet them and redress their wrongs willingly and even anticipate their wants, unless they wish to imperil their very existence. On the other hand, the public must not be unreasonable or unjust, and must not expect a service disproportionate to the traffic. Our wonderful growth in the past century has been to a large extent attributable to the rapid extension of our railroads and their efforts to settle immigration along their lines.

The individual termed statesman, but more often deserving the cognomen of politician, may well learn a most important lesson in fidelity to his country and appreciation of her needs. He is most often chosen, not for his peculiar fitness for his duties, but because he is a "good fellow," a liberal spender and a good stump speaker.

He frequently goes to our legislative halls without even a familiarity with the Constitution of his country or of his native state. But few know the first principles of the important questions of tariff, finance or revenue. Most measure a question by how it will look to their constituents and often prefer to vote wrongly than correctly, subject to the necessity of explaining at home. We learn that we must send better men to make our laws, and that real students, politically disinterested, should be consulted in framing our important measures.

No greater evidence of the lack of patriotism or inability of our legislators can be shown, than their attitude on the currency question now pending. This question, involving the very fundamentals of our commercial and financial systems, is at this moment the subject of political bickerings and policies that are a disgrace to the nation. Our Senate committee has framed an iniquitous bill which is shamefully in the interest of a few private bankers who hold a large amount of unsold railroad and municipal bonds, and is without a scintilla of the principles of sound finance; but, being a "party measure," we have still to hear the voice of a single Republican in protest. The House committee in turn has presented a bill which is violently socialistic, providing that the strong and safe bank shall guarantee the weaker ones, making the banker who conducts his business safely and conservatively, pay for the deficiencies of those who are reckless and inexperienced. Yet, we hear no violent protests against this bill, which is contrary to every constitutional principle of right. Must we learn from this that our legislators are without the ability to frame a proper and consistent law, or that they are lacking in fidelity to their country and shirking their responsibility for fear of losing office? Let these gentlemen learn the valuable lessons of the hour and read the clear handwriting on the wall, that unless this Congress passes sound currency legislation and makes proper amendments to the national banking law, we may be called upon to write the lessons of the panic of 1908; and with the distrust of capital and the suffering of labor incident thereto, the next lesson may entail internal social and political complications the contemplation of which may well cause even the conservatives serious alarm.

Our great Executive can learn mighty lessons from the present. He should realize that the man does not exist, who knows every-

thing from the law of the Sagas to bear killing in the swamps, that the greatest men have been either the specialists or those who, with the acumen and judgment of human nature, have had the capability to select wise advisers. He should study conditions and apply remedies in such doses as will cure and not kill the patient. He should be careful in correcting evils and punishing wrongdoing, not to inflict greater injury upon the innocent than on the guilty. He should learn more the use of expert commissions, and have more regard for their recommendations. Men can be selected in this great country, capable of judiciously solving any question for the public good, but they are men whose vocations, study and training have peculiarly fitted them. His hold upon the affections of the public and his unimpeachable honesty and strong patriotism, place him in a better position for the correction of existing evils and the betterment of our conditions, than any other who has ever sat in the Executive's chair, and it requires but the application of carefully thought-out methods with sound and conservative principles of good government, to bring about the restoration of confidence and the return to normal social and financial conditions.

The people must learn that extravagance is not comfort and that ostentatious display of wealth not only denotes illbreeding, but promotes anarchy and socialism. They must learn something of that quality which the Germans call "Gemuthlichkeit," which means comfort and contentment, the willingness to be satisfied with prosperity without stretching every enterprise to the point of breaking. They should become imbued with a greater desire for the modest comforts of home life, and in turn instill such ideas into their children, so as to change at least that characteristic of our people, that we term "strenuosity," into a more modified form of applied energy. They must discontinue their antagonism to wealth and corporate power when not exercised for evil, and must have the courage to do right and to be fair to all men, whether they be the representatives of millions or the toilers by the day. They must not believe, because some railroad presidents employ their offices in stock jobbing, or some bankers prostitute their offices for gain, or some politicians are corrupt, that all men in such professions are of similar character.

Let us then all learn that industry and effort and venture must have their reward; that men do not traverse the Plains, tunnel the Rockies and divert the courses of streams, simply to find investment

for capital to make a moderate interest; and that, therefore, prospective results may be justly if not excessively capitalized.

Many more lessons might be referred to, but the salient ones have been given, and we can learn to encourage our neighbor in the conviction that we live in a land blessed with the sweetness of health and plenty, needing but the magic touch of higher education, deeper home patriotism and greater confidence in each other.

THE OBSTACLES TO CURRENCY REFORM

By Lyman J. Gage,
Ex-Secretary of the Treasury.

The first evidence that a financial crisis had arisen in the late months of 1907, was found in the banking situation in New York City. The conditions necessary to produce it had evolved slowly. These conditions were an increasing expansion of bank credits, payable on demand, given in exchange for obligations, whether payable by *their* terms on demand, or at a future date, secured as to *payment* by certificates of stock ownership in some corporation, or by debt obligations, redeemable by their terms at some distant period of time. There then was, and long had been, an accepted theory that good investment securities dealt in on the New York Stock Exchange were at any time convertible into cash through a sale in the open market. One of the "lessons" learned is that the theory stated is true to a comparatively narrow degree and, put to a serious test, it utterly breaks down. We have learned that where all become "would-be" sellers, there is no power to buy. We have learned in a new and impressive way that expanding prices, stimulated by expanding credits, will at last lead to a crisis which must be faced.

Such a crisis was reached in the early autumn months of 1907. It was precipitated by calls from the interior for money to "move the crops." Response to these calls weakened the foundation of cash reserve, in the New York banks, to which the great superstructure of bank loans and bank "deposits" stood logically related. Something similar has been witnessed at each recurring harvest season for years past, and in truth it may be said, that in our system of banking and currency, a financial crisis is an annual visitation. Reference to the tabulated movements in loans, deposits and the cash reserve, sufficiently prove it to be so. But did not the crisis of 1907 differ from the crises of recent years? Yes, but rather in the intensity, than in the nature of it. The crisis, with all its necessary incidents of loss and distress, might have been met and overcome as have the yearly recurring crisis to which reference has

been made, except for certain aggravating accessories of fake banking and reckless administration brought suddenly into the light of publicity by the exactions of the occasion.

The situation of the Knickerbocker Trust Company and some institutions similar to it changed the condition of things. What would, rightly named, have been a grave crisis became something else, something more fierce, dangerous and destructive. The crisis was metamorphosed into a wild, unreasoning and destructive panic. There is always danger of such an eventuation in every period of crisis, or general financial strain, and our experience goes to show that our financial system offers little or no hindrance to the degenerative process which begins in crisis and ends in panic.

As with other peoples, a crisis is not an unfamiliar experience. Our marked inferiority is shown in the method and machinery which we employ to readjust the conditions which have become acute and threatening. It may be profitable to compare our financial machinery with that of France, as indicated by familiar history.

In 1870-71 France was in a state bordering on complete anarchy. She had fought an exhausting but futile war. She witnessed the triumphant march of the enemy's victorious army through the streets of her capital. She was under duress to pay a thousand millions of dollars of war indemnity to her conqueror. She was obliged to suffer the rise of the Commune—with its régime of riot, arson, bloodshed and ruin. Under circumstances like these, industry of course, suffered, trade and commerce were deeply afflicted, but through all the trying period these were steadied and supported by the continued operations of that great institution, the Bank of France. True, under the exigencies of events—and in the interest of prudence the bank suspended for a time specie payment upon its outstanding note issues, then amounting to some five hundred millions of dollars. These notes, it must be remembered, were not secured by the pledge of security in the hands of independent trustees. They were what must be denominated credit notes, or, if you prefer a name more opprobrious, they were an "asset currency." Nevertheless, by their use the bank continued to discharge its true and proper function with a minimum of interruption and derangement, and at no time in all that trying period did gold command a premium so high, measured by the notes of the Bank of France, as did ordinary paper money command with

us, measured by clearing-house checks, at a period of profound peace at the culmination of a year of unexampled prosperity, hereafter to be known as "The Panic Year 1907."

We had no Bank of France nor anything analogous to it. We had, instead, some 6,500 national banks, besides numberless other similar institutions, all of which, with a few remarkable exceptions, suddenly ceased to perform their functions as intermediaries in the exchanges and as lenders of money or credit. The quick consequences,—trade interruption, individual and corporate bankruptcies, the relegation of labor to distressful idleness, are too near and too familiar to our knowledge to need description. We have, I believe, received another painful lesson from which we may rightly gather that our banking and currency system must be put on new and better foundations. I shall not take space to mark out a "plan" for such a system. It may be allowed me here to point out some of the obstacles which must be met and removed as a necessary part of any adequate reform.

These obstacles consist of certain financial artificialities in government finances which, while they exist, make a return to principles dictated by economic law nearly or quite impossible. These artificialities menace the financial strength of the government and embarrass the true path to a wise and adequate system of banking and currency. What are some of these artificialities? When and how were they born? To answer the last question first, they were developed chiefly as a result of the necessities of the government in the Civil War. Of what do they consist? I name them briefly.

(1) The legal tender note—greenback. If it were necessary to issue them in the beginning they should long ago have been retired. They were a device born of a temporary need. They were false to the economic requirements of a true currency. Legally equal to gold as a cash reserve, we witness the anomaly of a debt obligation issued by the government made the legal basis for debt obligations issued by banks, to an amount four times as great. They thus weaken the foundation of metallic money—on which the fabric of our whole credit system must finally rest. It is perceived that non-interest notes payable on demand are an immediate economy over time obligations charged with interest, and this benefit the people refuse to surrender.

(2) The system of national bank notes was also a device to create an artificial market for United States bonds. Their issue and use bear no relation to the true law which should govern in the field where paper money performs its true function. The result is seen in two directions. In the first place it has artificialized the price of government bonds to an extent of at least 20 per cent, measured by the world's standard of value as found in a free and open market, where similar securities are bought and sold. As an incident to this artificialism, the government has become the guarantor of payment for some seven hundred millions of notes issued by more than 6,500 so-called national banks. That is a false relationship. It ought not to continue.

(3) By the drift of events, and through political pressure, there has been injected into the channels of our circulation some six hundred millions of silver now possessed of a natural commercial value, measured by gold, of about three hundred millions, but maintained at parity with gold through the government's pledge to maintain such a parity.

Looked at from the government's side, we have here a direct or contingent liability consisting of United States notes, $346,000,000, silver currency parity, $300,000,000, national bank notes, $700,000,000. This liability is not at all embarrassing to the government at the moment and is not likely to become so, provided we can continuously avert foreign or domestic war, and provided further, that the channels of trade where money circulates, can be to a large degree monopolized by the greenbacks and by silver or silver certificates. It is not germane to this discussion to consider the financial embarrassment which would face the government by reason of its artificial relation to money and currency, in the event of a costly and expensive war. I cannot, however, forbear to invite consideration to what is now everywhere recognized; viz., that a strong military chest and an unimpeachable credit, are as essential to success in war as are armies and navies. To the support of these latter we devote an approximate hundred millions each per annum, but for the sake of economizing a few millions we neglect to fortify our *financial* defense, we drift along in a position which must be confessed as weak if not inexcusable. It is, however, to the reflex effect upon our general industrial affairs that my thought must be directed. I have said that the path to

more perfect conditions in banking and currency is blocked by the artificialities developed by our financial legislation.

There would be no proper cause for complaint in this if it were true, as to many minds it seems to be true that the banking function, with its currency features, is a sort of privilege granted by the grace of government to certain favored groups who are thus permitted to exploit the people for their own exclusive aggrandizement. If such a view were the correct one, then the more of obstacles, restrictions and repression the better. But when a correct understanding takes the place of these misapprehensions, then it will be perceived that what hinders, restricts or prevents the just economic exercise of the banking function, interferes to embarass an agency which next below production and transportation ministers most directly to the industrial life wherein our material prosperity must be found.

In every other relationship, existing between men, there is a true law which, if discovered and obeyed, will bring in peace and happiness. So, in the field of banking and currency, there are principles which, recognized and adopted as the rule of action, must bring in as a resultant the highest benefits to all. Our history for the last forty years suggests in the most emphatic way that our banking and currency system has at some points been out of harmony with the true laws which should govern it. Unhappily, too, it is evident enough that if this be true the general apprehension of the fact is not at present wide enough or deep enough to induce the study of first principles, much less to give them the right of way, even if cherished prejudices, or apparent temporary advantages must needs be sacrificed.

Is it then possible for us to recast out statute laws so as to forestall in the future, the shameful situation in which our commercial and industrial interests now find themselves, as a consequence of the sudden, yet necessary cessation of proper functioning by the banking system, which we have been silly enough to call "the best on earth?" Yes, undoubtedly, provided we are able to recognize that principles are superior to make-shift policies. Patch-work legislation will not accomplish it. Invention, however ingenious, will only flatter, deceive and betray us. Only by complete recognition of and conformity to economic law, now fairly well understood by the thoughtful and experienced student—applied and tested as

it has been by older and more experienced nations—can the humiliating and costly lesson, furnished by the late "crisis" be made to bear fruit for the healing of the nation.

Impressed by the lesson to be drawn from the late crisis, our Senators and Representatives in Congress assembled, are engaged, to some extent, in considering by what measures the future can be guarded from the disasters which have overtaken us in the past and present time. Two bills of especial prominence are offered for approval. One is known as the Aldrich Bill, offered in the Senate; the other is known as the Fowler Bill, offered in the House. The first named seeks to bring relief to a financial crisis by providing an artificial method through which currency may be issued by the banks in a time of extraordinary pressure. It is a make-shift invention, operating to supplement other artificialities, the existence and continuation of which have been and will be disturbing, unsettling factors in the department of our credit machinery, the right working of which is hardly second in importance to continuous production and uninterrupted facilities for transportation. The Fowler Bill, in marked contrast, betrays in its author a thorough comprehension of what may be called the fundamentals in banking currency and exchange. Its scope is comprehensive, and it seeks to establish foundations so firm that while mild forms of crisis will and must of necessity occur, the degenerating tendency toward panic will be next to impossible. It eliminates almost completely the present injurous influence of government finances, to which I have referred, and without cost to the government or the people, enormously strengthens our public treasury to meet, if called upon, the emergencies of war. It puts the bank into those natural relations under which it can safely and effectively serve the commercial and industrial needs of the country.

The propositions involved in the two measures are radically different. As the only two which have yet appeared, they justly demand studious attention and careful thought from every citizen.

A NATIONAL CLEARING HOUSE AS A SAFEGUARD AGAINST PANICS

By J. M. Elliott,
President First National Bank of Los Angeles, Cal.

The panic of 1907 emphasized the closeness of even the remote parts of the country to the financial centers, and also the practical impossibility of any one banking institution's standing alone, no matter how carefully managed, in a city large enough to contain several competitors. There is a necessity of co-operation and a need of some strong bond of union among all the banks of a given locality. This may properly take the form of a clearing-house corporation with a charter and capital, through which the financial affairs of the members and all institutions clearing through them could be regulated. It is patent to all who have observed, that a panic is but the converse of the tide of extravagance, high prices and speculation, and if these latter could be curbed or even modified, the former would not occur. If the clearing-house plan for individual cities was extended and a national clearing house formed, of which each one of the local clearing houses would be a constituent part, the trade of the country might be so regulated as to avoid the dangers which bring about these troubles, and though our advance as a people would appear slower, it would be saner and safer in every way.

These local clearing-house corporations which I am suggesting should, in addition to the usual exchange of checks and daily settlement between its members, employ a high-priced auditor, whose business would be to constantly and critically examine into the affairs of the members, and also of all banks clearing through them, and to report to the committee any infraction of good banking principles; it being the rule that any bank offending, would be first admonished, then fined, and finally expelled, if the practices were continued. Among such practices to be reprobated I may mention,—pyramiding bank deposits, paying too large rates of interest, loaning too heavily to any one borrower or set of borrowers—especially directors, organizing a clique to maintain a chain of banks, the use

by the officers of the money or influence of their respective banks for their personal benefit.

The national clearing house would be governed by a board elected by the members, and it should have a competent staff which would, through the reports of the local clearing houses, keep in touch with the business of the country. The order of the central association to all its members to decline to handle the checks of any bank which had been for cause expelled from a local organization, would be a penalty that few institutions would care to face. If this national clearing house should fill its mission well, it would not only inspire confidence in itself, but in all of its ramifications, and it would uplift the whole banking business of the country to a higher plane. It would in time surely attract the attention of Congress, and it would be recognized as the proper channel through which legislation would reach the banks of the country. It might in the end so modify the existing laws that no institution would be allowed to receive deposits unless it had a government charter permitting it to do so, and government examination to assist in correcting any untoward tendency. This national association could adopt rules which would keep the commercial banks, the savings banks and the trust companies closely confined to their own special lines.

The bankers of a given locality know quite well the quality of the management of their competitors, but under present conditions, those who are conducting their business in careful and honorable fashion feel compelled to keep silence while the speculative, the unfit, the unfair, and sometimes the fraudulent, competitor is following the road to ruin for himself and incidentally bringing trouble, anxiety and loss to all honestly engaged in the business, besides engendering that lack of confidence in the whole banking fabric which has been built up by the reputable by years of honest dealing. The confidence of its customers in any bank is as valuable as its capital stock, and it is unfair to allow it to be damaged by any one man or institution. If the government cannot provide protection for this valuable asset of ours which we have labored patiently for years to build up, let the bankers of the country band together in some way to protect themselves, their depositors and stockholders.

One other lesson of the financial trouble has been, I think, ap-

parent,—that the bank officers who were interested in many outside institutions or affairs were handicapped thereby. In other words,—the banker, to meet his obligations in the best way, should largely confine himself to his bank.

In the Far West practically the same means were taken as in the East to tide over the recent time of distress. The country banks were very much less affected than those of the cities, and in many cases conducted their business almost on normal lines. In Los Angeles, clearing-house loan certificates were issued, which have at this writing been retired. The ratio of issue was $66^2/_3$ to the 100 of approved securities. The scrip which was issued was merely a certificate that securities representing twice the amount of the face of each paper were held by the clearing-house committee, and its redemption was guaranteed by all the clearing-house banks. The non-clearing-house banks were allowed to avail themselves of the facilities of the clearing-house association in proportion to their needs and capital. There was some hesitation at first, principally by the laboring men, as to the acceptance of these certificates, but after a short time they passed current without any question, and their issuance had the approval of the large majority of thinking people. About ninety per cent of the total amount issued has been at this writing retired, and the ordinary circulation has very largely resumed its place.

TRUST COMPANIES AND RESERVES

By A. S. Frissell,
President Fifth Avenue Bank, New York.

The difference between a civilized and a barbarous country, from a commercial point of view, is that one uses credit largely, and the other but little. Credit rests upon cash; banking rests upon cash. A reserve is the foundation on which the superstructure of credit rests, and it must be broad enough to carry the weight. A reserve is little used in ordinary times, but it is kept not only for a basis of credit, but for actual use in times like the present. In 1893, as well as this year, the clearing-house banks in New York decreased their reserves from 25 per cent to 20 per cent, and by so doing kept the Stock Exchange open, relieved the trust company situation, shipped money to the interior, and in general built a bulwark against extreme fright and loss. Another important thing about reserve is mobility. The clearing-house banks, by acting together without friction or trouble, and by the issuance of clearing-house certificates, automatically helped their weaker members, and the weaker banks obtained such help as was necessary without delay or humiliation. Even before the loan certificates were issued, it was easy for the clearing-house banks, with their accumulated reserves, to pay if necessary the deposits of the three banks which needed assistance and reorganization. Compare this with the halting, irregular, and protracted manner in which the two trust companies were helped! There were lines of anxious depositors outside their doors for weeks. These trust companies could not immediately obtain the requisite assistance. This shows the difference between the disadvantages of the slight trust company reserves, as now managed, and the tried and ample reserves of the clearing-house banks. The claim that additional cash reserve takes money out of circulation is without force if reserves are insufficient.

Deposits of the clearing-house banks in the City of New York

have increased from $370,300,000 in 1893 to over one billion dollars, owing in part to the large increase in the production of gold in the world. The clearing-house banks have built up their cash reserves since 1893 from $93,000,000 to $256,000,000. The fact that the trust companies in the Borough of Manhattan have not increased their reserves correspondingly while their deposits have been increasing, from about $224,000,000 in 1893 to over one billion dollars in 1905 has contributed to the present panic. A billion dollars in deposits is a superstructure that cannot be maintained on a 5 per cent cash reserve, and it was sure to topple over.

Time Favorable for Increasing Reserves

There is a difference between the periodical lock-up of funds in the United States Treasury and the gradual increase of reserve by banks and trust companies, because after the reserve has once been accumulated it fluctuates only as the deposits rise and fall. We are in a position similar to that of a country desiring to get on a gold basis. Gold naturally flows where it is most desired. Just at this time the accumulation of additional reserve can be easily accomplished. In the panic of 1893, after the reserves of the clearing-house banks had gone down to 20 per cent, as was the case this year, they increased before the end of the year to about eighty million dollars surplus reserve above 25 per cent. This was on $506,000,000 deposits—less than half of our present deposits in clearing-house banks. The same increase after the close of our present stringency would give the banks over $160,000,000 surplus reserve; should we succeed in getting this amount it would be nearly enough for the reserves of the trust companies. Another reason why this is an exceptionally good time for building up reserves is that the trust company deposits are low, and a relatively smaller amount of cash will be required. A similar situation cannot be expected to occur until after the next panic.

If the trust companies, with or without legislation, will judiciously lock up the coming plethora of money in their own vaults, they will hold, in whole or in part, the gold which has been shipped here in such large quantities, and the rates of discount will not be high.

Trust Companies Should Keep Their Own Reserves

There is a reason for country banks keeping reserve accounts in New York, because their business requires them to draw on New York, but there is no economic reason for a trust company to keep a reserve account in another institution in the same city, other than in a central reserve bank like the Bank of England. A few years ago, even as late as 1897, when the trust company deposits were only $258,000,000, they were small compared with the deposits of the clearing-house banks, and it was not a matter of so much importance, but now when the trust company deposits have been nearly equal to those of the clearing-house banks, the situation is serious.

One objection to allowing the reserve of one institution to be kept in another institution in the same city has developed in the recent panic. Under the reciprocal reserve plan Trust Company A deposits $500,000 with Trust Company B, Trust Company B deposits an equal sum with Trust Company C, and Trust Company C deposits the same amount with Trust Company A, thus making one-half million dollars counted as reserve three times.

A number of the recent reports of the joint-stock banks in London show that even there they have leaned too much on the Bank of England, and that it is necessary for the joint-stock banks to keep a larger reserve in their own vaults.

Call Loans not a Substitute for Cash

It is objected that the cash reserves of trust companies are not necessary, as they do not depend upon the cash, but upon their call loans for fluctuations in deposits. This is no less true of the national and state banks in New York City, but the stock market, as well as all other business which is represented by dollars, depends upon cash. One of the things that the clearing-house banks have to do in a time like this is to see that sufficient money is lent to share and bond dealers, in order that there may be a market for the purchase and sale of securities. In 1873 clearing-house certificates were not issued early enough, and the condition of affairs became so chaotic that it was necessary to close the Stock Exchange for about ten days, and call loans could not be paid. Support comes from the reserves, and the trust companies should do their share.

Difference in Reserves Equivalent to a Rebate

If a town has a railroad rebate, the competitive town without the rebate goes to the wall. The press has shown how a system of rebates has destroyed competition. The present discrimination in favor of the trust companies, that is, between 25 per cent cash reserve and 5 per cent cash reserve, is 80 per cent. If the trust company cash reserves should be increased even to 20 per cent, the rebate against the banks would be 20 per cent—that is, the difference between 20 per cent and 25 per cent reserve. On the face of it the comparative profits of the trust companies and banks may not be of public interest, but a slight examination of the subject shows that good banking is essential to the public good. The competition of the trust companies, both in the city and state, has honeycombed the banking situation; it has tempted the banks, in order to meet the competition, to take long loans for better rates and take undue risks. It seemed necessary for the banks to do this in order that they might pay the same rate of interest as the trust companies did easily with their smaller reserve. The reports of the trust companies, state and national banks in the Borough of Manhattan, show that the trust companies get profit on 92.2 per cent of their resources, as against 70.3 per cent and 70.9 per cent by the national and state banks respectively; these figures show how great the rebate has been against the national and state banks in favor of the trust company business. Even should the reserves of the trust companies be increased to 20 per cent, they could frequently pay 1 per cent more interest than the banks carrying 25 per cent reserve. A few only of the old and established banks have, for themselves, met the situation by refusing to pay interest at all, but this is impracticable for the new or ordinary bank.

The Interest of a Few vs. Public Interest

The banking situation in New York is peculiar. There are banks which have heavy deposits from country banks, and to this extent they are protected from trust company competition. Other banks in Wall Street have large trust company deposits; this enables them to accept the trust company competition with profit. But the majority of the banks in the clearing house, as well as the thirty other banks in the Borough of Manhattan which are not in the clearing house, are not thus situated, and but few state and

national banks throughout the State of New York have any of the favorable conditions named above. They protest strongly against the bad banking which is induced by this unfair competition. Two state institutions doing substantially the same business should be under the same regulations as regards reserve, whether called banks or trust companies. The report of the New York State Commission appointed by Governor Hughes, properly tries to help the situation as far as the country is concerned, but the Borough of Manhattan is left to struggle with the difficulties alone, in a modified form.

There are 404 national banks in the State of New York, and 196 state banks, making 600 in all. Many of these banks have long and honorable records. The solution has been proposed by different trust company officers that the national and state banks should become trust companies. It can fairly be asserted that this would not be for the public good.

No Exclusive Right in Time Deposits

There is something amusing about the sacrosanct view regarding trust company deposits. There seems to be an implication that time deposits belong to the trust companies of right. Banks have always favored deposits likely to remain, and in fact, they are the cream of the business.

The majority of the above-mentioned commission tried hard to find some way of differentiating the trust company deposits, so as to arrange for one reserve on deposits subject to check and a different reserve on time deposits, but they found practical difficulties in enforcing any such provision.

Then the commission tried to arrive at what should be the reserve for total deposits. The statistics gathered by the committee, contained in the report, show that

The average gross deposits of the trust companies for three periods (January 1, 1906; January 1, 1907; August 22, 1907) were	$841,000,000
Deduct from this	
Average sums held as executor, etc.	35,000,000
Which leaves net deposits of	$806,000,000

The average deposits represented by certificates were $81,000,000, or only about 10 per cent of the net deposits. To represent

this 10 per cent of time deposits, the report allows the trust companies to keep 15 per cent cash reserve on their total deposits, as against 25 per cent cash reserve proposed for the banks in the Borough of Manhattan. This is really an allowance of 40 per cent in reserve to cover the 10 per cent of trust company deposits represented by certificates.

From my point of view this is not fair to the banks, as there are probably many banks which have more than 10 per cent of deposits which may fairly be called time deposits, such as funds awaiting investment, etc. The bank I serve is one, and such banks should be considered instead of discriminated against in new legislation. Why should not those deposits of banks which are really time deposits be considered as well as trust company time deposits? The banks have been driven into paying interest by the trust companies doing a banking business, and should have the same opportunities for receiving time deposits, on as favorable terms as the trust companies. In fact, banks were organized to receive deposits, while trust companies formerly only received deposits by inference. Trust companies already have advantages over banks in that they have a number of profitable functions other than receiving deposits.

Time Deposits Not Tested by Exchanges

The trust companies have argued that because the checks paid over their counters daily are not as large in volume as those which pass through the clearing house daily, it shows that their deposits are permanent, and therefore less reserve is necessary. This may or may not be true, because, taking a merchant for instance, while his average balance may remain practically the same, the transactions on his account may be very numerous.

Conclusion

A reserve for the state banks and trust companies in the Borough of Manhattan of 25 per cent in cash will put them on a par with the national banks, and will make the banking system uniform as regards reserve. Should this reserve prove too high, or too difficult of accomplishment, the reserve called for in the national bank act could probably be modified. At present the national banks are harassed by the unfair competition of the trust companies, as shown by the introduction of bills in Congress tending

to give them a better chance to compete with the trust companies. The express intention of the legislature to equalize the reserves of the national banks, state banks, and trust companies, would be a basis under which all would be working together under one reserve for sound banking, instead of working against each other, as is the condition at the present time, and the advantages of sound banking to the community as a whole can hardly be overestimated, in view of the anxiety, loss, and depression of business caused by the present panic.

The Relation of the Municipality to the Water Supply

A SYMPOSIUM

Amsterdam, Holland.—G. M. Boissevain, Amsterdam, with the assistance of Mr. Talkenburg, Director of the Statistical Bureau, Amsterdam, and Mr. D. Drost, Engineer and Sub-Director of the Municipal Waterworks, Amsterdam.

Berlin, Germany.—Prof. Dr. Conrad Bornhak, University of Berlin.

Copenhagen, Denmark.—Dr. William Scharling, Copenhagen.

Stockholm, Sweden.— O. Nordenstrahl, Stockholm.

Upsala, Sweden.—G. Laurell, Upsala.

Madrid, Spain.—Chester Lloyd Jones Ph.D., University of Pennsylvania, Philadelphia.

AMSTERDAM, HOLLAND

By G. M. Boissevain, Amsterdam, with the assistance of Mr. Talkenburg, Director of the Statistical Bureau, Amsterdam, and Mr. D. Drost, Engineer and Sub-Director of the Municipal Waterworks, Amsterdam.

History of Establishment of Water Supply to Consumers.—On April 20, 1849, a concession was granted by the municipality of Amsterdam to Mr. C. D. Vaillant for the supply of drinkable water from the dunes, and on June 19, 1851, the royal sanction was obtained for the establishment of the Hill Water Company (principally with English capital), which took over the concession of Mr. Vaillant.

In the years 1852-54 the works of the Hill Water Company were constructed, viz.: An open canal was dug in the dunes at Vogelenzang, near Haarlem, with a length of about two kilometers; a pumping station, three open slow-sand filters and a clear-water reservoir were built in the neighborhood and a twenty-inch cast-iron pipe was laid to Amsterdam via Haarlem, about twenty-two kilometers long. May 1, 1854, the works were opened with eight consumers. On August 17, 1854, the town of Haarlem

granted the concession of its water supply to the same Amsterdam Hill Water Company.

January 1, 1855, the length of the pipe lines was already increased to 41.8 kilometers. In the following year the total delivery of Hill water amounted to about 250,000 cubic meters. In the year 1876, a second cast-iron main pipe, twenty-four inches wide, was laid to Amsterdam and was put in operation in the month of May of the same year. On April 1, 1885, the concession to the Hill Water Company was renewed by the municipality of Amsterdam, wherein the obligation was imposed to build a new water supply from the river "Vecht," at Nigtevecht, near Weesp, for industrial and public use, lawn waterings, municipal establishments, extinguishing of fire, etc.

The Vecht water supply came into operation on May 1, 1888. The works consisted of a pumping station with two settling-basins, four slow-sand filters and a clear-water reservoir at Weespercarspel; an intake at Nigtevecht with a forty-eight-inch cast-iron feeding pipe of a length of nearly 4,500 meters to the above-said pumping station, two head-mains to Amsterdam, of twenty-seven-inch and twenty-four-inch width, each 9,250 meters long, and separate pipe lines in the town. This Vecht water supply, established with the purpose of superseding the Hill water supply, which could no longer deliver its water under a sufficient pressure, did not satisfy expectations.

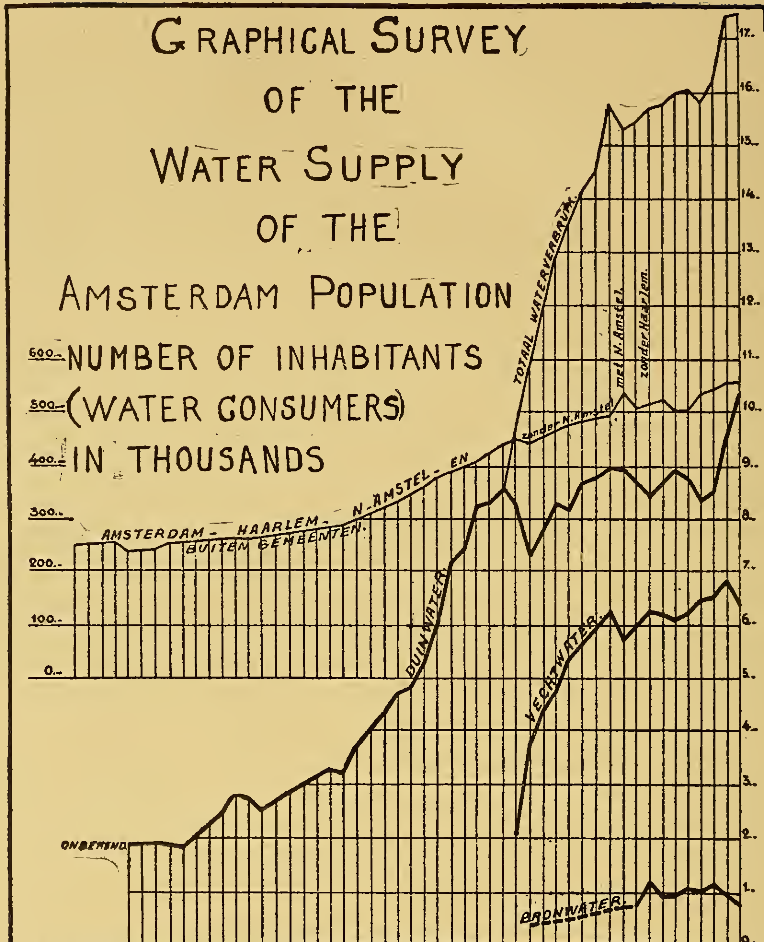
The supply of the Hill water was in a great part of the town wholly insufficient, and the agitation for municipal exploitation increased, till, after a long struggle, the town of Amsterdam took over the works of the Hill Water Company on May 1, 1896. In the meantime, by the increasing of its borders, the town came into possession of the Heathwater supply with a smaller capacity, which, since 1888, supplied the suburb Nieuwer-Amstel with heath water from the heath in the neighborhood of Hilversum.

The Heathwater supply, which provides a quarter of about 60,000 inhabitants by means of a water-tower with a reservoir of 500 cubic meter capacity, standing near the border of the town, receives the heathwater by a twelve-inch cast-iron pipe of twenty-seven kilometers length.

This water is pumped to the town from the pumping station by fifteen well pipes, from thirty-six to forty meters deep. It has no filtration. Since May 1, 1896, the town of Amsterdam has exploited accordingly three municipal water supplies, viz.:

1. The Hill Water supply, for domestic use.
2. The Heath water supply, for domestic use.
3. The Vecht water supply, for industrial and public purposes.

May 1, 1898, the supply from the dunes in behalf of the town of Haarlem was no longer continued, because this town had built waterworks for its own use. To improve the supply of Hill water in Amsterdam, after the community had come into possession of these works, great works of alteration and extension were immediately executed. In the dunes near Vogelenzang new canals were digged and the existing ones deepened. so that at the present time the Hill water is obtained from about twenty-five kilometers of open canals. Instead of the old pumping station a new one,



JAAR.	HOEVEELHEDEN GEPOMPT WATER IN M.³ DUIN.	VECHT.	BRON.
1855			
1856			
1857			
1858			
1859	1917822		
1860	1929400		
1861	1950676		
1862	1917300		
1863	1869600		
1864	2016800		
1865	2262200		
1866	2541800		
1867	2892000		
1868	2876000		
1869	2590300		
1870	2768000		
1871	2891460		
1872	3017410		
1873	3194730		
1874	3346860		
1875	3299340		
1876	3756700		
1877	4037750		
1878	4318760		
1879	4690470		
1880	4884545		
1881	5261262		
1882	6039970		
1883	7024199		
1884	7459091		
1885	8209633		
1886	8350256		
1887	8580536		
1888	8134727	2017075	
1889	7193711	3702191	409300
1890	7687120	4352070	428500
1891	8343816	4724719	486600
1892	8114440	5400428	445400
1893	8700777	5572505	523900
1894	8839493	5283389	529400
1895	9009202	6227389	613782
1896	8919226	5656517	655272
1897	8671776	6081646	671775
1898	8555718	6276820	1110224
1899	8590202	6275836	965980
1900	8955890	6127093	937885
1901	8735044	6295155	1001936
1902	8363452	6422405	1069585
1903	8525948	6556032	1166135
1904	9621863	6888683	922783
1905	10346479	6385293	751784

WATERVERBRUIK IN MILLIOEN M.³

with two vertical triple-expansion engines, water-cellars and new filters was built; and in Amsterdam a low level reservoir of 10,000 cubic meter effective capacity, with a new pumping station at the Haarlemmerweg, which pumps the water directly into the town, was constructed. A large ring-pipe line was laid.

Charges to Consumers.—On May 15, 1900, the low-level reservoir and the pumping station at the Haarlemmerweg came into operation, and on January 1, 1901, the new pumping station near Vogelenzang. Since the extension and improvement of the network of pipes, completed, for the greatest part, in June, 1902, the Hill water can be delivered in all parts of the town with a pressure of twenty-five meters. In the town the pressure of the Heath and Vecht water amounts to from thirty-five to forty meters. The Vecht water, for public service, watering, fire-quenching, etc., is delivered cost-free; for industrial purposes, however, it is charged for by meter, and is computed at 10 à 15 cents per M_3 according to a special tariff. For domestic purposes the price of the Hill and Vecht water is computed according to the number of rooms.

See the graphical survey preceding.

SURVEY OF THE WATER DELIVERY PER MONTH AND PER DAY (1905).

Month.	Total consumption in M^3. Hillwater.	Vechtwater.	Heathwater.	Consumption in liters per day and per head of Hill, Vecht and Heathwater. Max.	Aver.	Min.	Average number of inhabitants.
January	803,880	449,032	58,389	90	77	57	551,777
February	738,538	398,436	52,202	90	77	57	552,539
March	813,329	439,353	60.319	86	76½	57½	553,169
April	807,167	499,786	52,127	94	82	60	553,505
May	906,728	612,527	60,293	116	92	67½	553 559
June	941,329	626,716	63,389	118	98	71	553,509
July	993,573	686,109	70,523	121	102	76	553,623
August	943,636	655,993	67,872	114	97	71	553,987
September	899,246	569,443	65,723	103½	92	70	554,686
October	874,630	490,212	64,540	94	83	62	555,548
November	819,823	477,333	69,459	94	82	61	556,423
December	809,600	480,353	66,948	94	78	55½	557,248
Year figure 1905	10,346,479	6,385,293	751,784	121	86	55½	554,515

The number of inhabitants amounted on January 1st, 1905, 551,416.
The number of inhabitants amounted on December 31st, 1905, 557,614.

Experience with Water Meters.—In total, about 3,600 water meters are in use, nearly all in industrial establishments. As for exactness the disk meters, marked "Etoile," give the best satisfaction.

Relation of Water Supply to Public Health.—See Schedule I hereafter.

Profits.—See Schedule II hereafter.

Present Condition of the Works. Plans for Improvement.—The examination of the dunes in the last three or four years has shown that the water, suitable for drinking, is to be found there at a depth of more than 100 meters, the drawing of water takes place from those deeper layers of sand by means of 100 well-pipes of about forty meters depth.

In many respects the works will soon be at the limit of their capacity, especially for the maximum consumption in summer. When this condition is reached the extension will be executed either by enlarging the three existing water works, or by building of a wholly new water supply. These propositions have for many years been under discussion, but no decision has yet been reached.

MORTALITY.

The mortality caused by febris typhoidea at Amsterdam in the years 1854-1905 compared to the use of the Hill water supply.

Years.	Average population.	Mortality caused by Febris Typhoidea.	Number of contracts for water delivery.	On 1000 inhabitants. Mortality to Typh.	On 1000 inhabitants. Contracts.
1854	250,500	370	960	1.48	3.8
1855	254,395	544	1,695	2.14	6.7
1856	257,696	485	2,231	1.88	8.7
1857	259,955	499	3,198	1.92	12.3
1858	260,282	480	3,676	1.84	14.1
1859	251,915	403	4,413	1.60	17.5
1860	244,188	313	5,031	1.28	20.6
1861	246,713	272	5,597	1.10	22.7
1862	251,685	268	6,285	1.06	25.0
1863	256,752	301	7,138	1.17	27.8
1864	259,099	367	7,801	1.12	30.1
1865	261,199	368	8,578	1.41	32.8
1866	263,594	256	9,293	0.97	34.6
1867	266,062	261	9,960	0.98	37.4
1868	269,695	295	10 797	1.09	40.0
1869	268,431	294	11,427	1.09	42.6
1870	267,575	220	12,271	0.82	45.9
1871	271,782	251	12,959	0.92	47.7
1872[1]	275,638	202	13,542	0.73	49.1
1873	279,854	149	14,265	0.53	51.0
1874	284,438	105	15,200	0.37	53.4
1875	288,457	112	16,223	0.39	56.2
1876	293,091	93	17,318	0.32	59,1
1877	299,233	89	18,393	0.30	61.5
1878	305,607	131	19,730	0.43	64.6
1879	312,979	96	20,405	0.31	65.2
1880	321,603	167	21,080	0.52	6[illegible].6
1881	332,121	109	22,168	0.33	66.8
1882	344,124	84	23,232	0.24	67.5
1883	355,763	74	24,093	0.21	67.7
1884	363,993	67	24,412	0.18	67.1
1885	369,492	42	24,936	0.11	67.5
1886	375,505	55	25,211	0.15	67.1
1887	384,351	54	26,196	0.14	68.2
1888	394,720	58	27,221	0.15	69.0
1889	403,742	49	27,899	0.12	69.1
1890	412,800	82	28,481	0.20	69.0
1891	422.226	49	29,146	0.12	69.0
1892	432,403	64	29,658	0.15	68.6
1893	442,274	69	30,368	0.16	68.7
1894	448,418	32	30,950	0.07	69.0
1895	453,186	40	31,644	0.09	69.8
1896[2]	{479,791 / 494,224}	41	39,313	0.08	79 5
1897	489,572	45	39,205	0.09	80.1
1898	497,572	53	35,719	0.11	71.8
1899	506,281	57	36,726	0.12	72.5
1900	515,727	64	37,634	0.12	72.8
1901	525,660	40	38,619	0.08	73.5
1902	534,767	43	39,885	0.08	74.6
1903	542,674	46	40,631	0.08	74.9
1904	548,974	46	41,610	0.08	75.8
1905	554.514	64	42,400	0.12	76.5

[1]In this year the law on the contagious disease was applicated.

[2]The contracts of the water supplies are calculated on the population ot the December 31; the mortality upon an average of the population.

Profits.

II.

FINANCES OF THE AMSTERDAM WATERWORKS.

	1897	1898	1899	1900	1901	1902	1903	1904	1905
Expenses.	Florins	Florins	Florins	Florins	Florins	Florins	Florins	Florins	Florins
Salaries............	120.028,60	121.521,13	129.268,56	137.831,11	165.621,17	185.064,33	185.979,81	188.351,90	196.708,01
Costs of offices and administration.......	18.070,63	21.352,50	20.299,28	23.013,95	28.296,33	27,784,21	28.564,43	28.237,04	51.177,94
Maintenance of the pipe-lines, etc......	57.384,45	56.417,43	72.215,67	81.927,32	94.310,81	140.952,61	138.743,79	141.375,76	119.617,22
Maintenance of the buildings and prise-d'eau............	18.952,37	13.356,64	12.839,42	27.686,23	35.756,59	54.200,78	45.158,11	58.896,38	65.391,21
Maintenance and driving engines........	66.989,41	78.866,18	96.786,95	130.846,97	192.571,27	109.196,21	118.909,80	129.502,77	115.851,73
Remaining expenses....	27.508,12	34.659,51	42.276,06	57.654,52	67,882,63	68.313,24	78.061,62	78.550,12	68.440,27
Total..........	308.933,59	326.173,40	373.685,96	458.960,11	584.438,81	585.511,40	595.417,57	624.913,98	617.186,40
Receipts.									
Water delivery.......	1.460.279,74	1.422.084,51	1.432.932,47	1.475.421,54	1.531.159,73	1.582.616,37	1.680.147,55	1.745.335,94	1.777.305,17
Hire of meters.......	26.390,01	27.172,75	27.414,67	28.234,35	29.088,75	30.363,04	33.366,92	34,208.69	34.379,41
Remaining receipts....	2.747,70	12.425,84	5.551,53	7.915,10	10.074,34	16.184,43	23,293,10	26.323,45	29.356,95
Total..........	1.489.417,46	1.461.683,11	1.465.898,67	1.511.570,99	1.570.322,82	1.629.163.84	1.736.807,57	1.805.868,09	1.841.041,54
Net receipts......	1.180.483,86	1.135.509,71	1.092.212,71	1.047.512,99	985.884,01	1.043.652,44	1.141.389,99	1.180.954,11	1.223.855,14
Of which there was used for									
Payment to the community............	100.000,00	100.000,00	100.000,00	100.000,00	100.000,00	100.000,00	100.000,00	150.000,00	150.000,00
Interest............	326.090.83	320.890,42	315.565,00	329.407,30	359.612,28	382.425,38	383.222,24	398.079,49	397.056,30
Amortization.........	198.000,00	203.000,00	208.000,00	213.000,00	233.320,99	252.155,67	275,815,28	280.815,28	285.815,28
Reserve............	556,393.03	511.619,29	468.647,71	410.203,58	292.950,74	309.071,38	378.352,47	352.059.34	390.983,56

The Chemical Analyses were over 1905, upon an average (in milligram per liter).

Averages over 1905.	Hillwater.[3]	Heathwater.	Vechtwater [3]
Klewr in (m. G. Caramel) per Liter...	4	colourless	8.8
Vaste stoffen, gedroogd by 180° C...	351.7	88.9	443.2
Gloeiverlies	19.6	6.2	40.5
Yzeroxÿde (Fe_2O_3)	0	0	0
Calciumoxÿde (CaO)	134.5	27.1	101.4
Magnesiumoxÿde (MgO)	9.8	2.4	19.7
Zwavelzuur (SO_3)	26.6	3.3	28.4
Chloor (Cl)	32.3	13.5	134.8
Kiezelzuur (SiO_2)	16.6	9.1	2.3
Ammoniak (H_3N)	0	0	0.012
Albuminoid ammoniak	0.072	0	0.117
Salpeterigzuur (N_2O_3)	0	0	0
Salpeterzuur (N_2O_5)	2.20	0.52	3.69
Zuwistofin cub c. M. per liter (O_2)...	5.85	4.09	5.51
Koolzuur (vry enhalfgebonden (CO_2)	105.	28	70
Kaliumpermanganaat ter oxÿdatie der-org. stoffen ($KMaO_4$)	5.2	0.32	11.4
Totale hardheid in Duitsche graden $\left(\frac{Ca\,O + 1,4\,Mg\,O}{10}\right)$	14.82	3.04	12.90

BERLIN, GERMANY

By Professor Dr. Conrad Bornhak, University of Berlin.

The present water works of Berlin consist of two establishments, Tegel-Charlottenburg and Müggelsee-Lichtenberg. These supply the entire city of 2,500,000 inhabitants up to a maximum demand of 100 liters per capita. This quantity of water represents a supply of three cubic meters per second, and is divided between the two works, the Tegel station supplying one-third and the Müggelsee station two-thirds. The former works contain two divisions and the latter three, each of which may be operated separately. Tegel and Müggelsee are the supply stations where the water is stored and from which it is delivered to the intermediate water stations of Charlottenburg and Müggelsee. The reservoirs for purifying the water are found in the former places and in them the large quantities pumped in night and day are held. It is there stored up during the hours when the demand is lowest and drawn off during the hours of greatest use.

The water of Berlin in recent years has been supplied entirely from ground wells. Formerly the Tegel Lake was used as a source of supply. In the 70's of the last century an appropriation of land in the vicinity of Tegel was made from which well water was drawn from twenty-three wells but it was soon found that this water was polluted. It contained a large

[3]Filtered water.

amount of iron and certain algæ also made its use unadvisable. All the city officers made strenuous efforts to eliminate these bad qualities, but the question of supplying good well water to Berlin remained unsolved and at that time was given up as unsolvable. Later, however, renewed investigations with drilled wells in the vicinity of Müggelsee and Tegel were followed with such favorable reports that the technical possibility of supplying Berlin with good well water was put beyond doubt.

The explanation of this discovery of good water in the immediate vicinity of the wells formerly condemned is found in the fact that the earlier wells averaged only sixteen meters in depth. The deepest one was not more than twenty-five meters, while the new driven wells were sunk to at least fifty meters. With these greater depths the former presence of algæ, which had rendered the well water unfit for use, was eliminated, and the iron also disappeared. With the disappearance of iron practically all the carbonic acid gas was also eliminated. To this fact was due the elimination of the algæ which needed this substance for their nourishment. It was now felt that well water should be supplied to Berlin to the exclusion of the use of filtered surface water the well water possessing a distinct advantage over the other in its freedom from germs.

The very favorable lay of the land which acted as a natural filter for the rain water sinking through it, brought it about that the well water was entirely free from bacteria. A further advantage in favor of well water is its uniform temperature of 10° Celsius in contrast to the water from the rivers which was always too warm in summer and too cold in winter. Although the advantages and practicability of supplying the well water to Berlin were well known, the general public was not aroused to bringing about any change in the passable good service formerly rendered from the Tegel plant.

Not until other circumstances forced a change did the city transform its water supply system. The rapid growth of population of late years had forced the northern suburbs of Berlin to establish large drainage areas whose outlet was the Tegel Lake. As this was the natural means of drainage for the regions involved, the officers of the city believing that it involved no danger to the health of the community, did not feel justified in refusing the suburbs the privilege of sending their sewage into the lake, especially as these communities were not in a financial position to provide other means of disposal such as filter fields. The dangers of pollution of the Tegel Lake could have been removed by the transference of the sewage outlet to a point farther down the River Spree near Fürstenbrunn. However, this would have involved considerable expense. This remedy was not adopted, however, because the community of Reinickendorf was about to install a similar drainage system into the lake which could not be disposed of in the same way.

The royal government now placed upon the City of Berlin the duty of transferring its water supply to the use of well water exclusively as it was evident that the Tegel Lake could not permanently be kept clean as a source of supply. The beginning in exploration for new well locations was made

in 1899, five deep wells and eighty-one exploring tubes were sunk in the Tegel forest. These explorations showed that the supply of ground water was sufficient to furnish the quantity formerly supplied from the lake. This could be done without lowering the level of the water to such a degree that it would interfere with forest projects or agricultural operations. This conclusion having been reached, both branches of the Tegel supply were transformed in succession, the first division for furnishing water from the new wells coming into use in 1901 and the secod section in 1903.

Meanwhile the transformation of the Müggelsee works was under way. The situation at Müggelsee was not so unfavorable as yet as at Tegel, although similar bad conditions had made their appearance and were to be feared even more in the future. The factories in the neighborhood were growing in a remarkable degree and emptied their sewage into the Spree. In addition, the floods of the spring and fall in the Spree forests carried into the water a large amount of humus which gave it a yellow color and made it unfit for use. The explorations in this neighborhood had produced even better results than at Tegel, so the city authorities decided to rebuild entirely the Müggelsee works. The modification will be completed by the end of the present year. The following table shows the development of the use of water in the City of Berlin from the beginning of the water-works system:

Year.	Districts supplied with water.	Total water delivered in the city in cubic meters.	Per capita use of water per day (liters).	Total quantity of water delivered on one day in the year.			
				Greatest.		Least.	
				Cubic meters.	Date.	Cubic meters.	Date.
1857 ...	669	2,462,836	224.00	....	......	....	......
1862 ...	2,359	3,919,823	101.00	18,246	7.6	5,830	1.1
1867 ...	5,500	9,213,951	104.00	34,353	31.8	16,068	22.4
1872 ...	7,524	13,953,070	79.00	54,575	27.7	24,107	7.1
1876 ...	9,649	17,537,030	90.00	62,468	19.8	33,677	1.1
1877 ...	12,365	20,545,845	90.00	76,210	24.8	37,210	Feb.
1882 ...	16,876	22,434,532	63.70	82,010	15.7	46,557	1.2
1887 ...	19,193	30,877,360	64.87	119,215	30.7	61,606	25.12
1892 ...	22,638	40,035,922	67.13	163,976	25.8	75,645	26.12
1897 ...	24,662	49,882,328	77.87	202,385	30.6	94,510	2.1
1902 ...	26,525	55,142,646	79.13	218,220	4.6	104,011	25.12
1904 ...	27,806	60,861,335	84.17	251,174	16.7	109,793	26.12

The decrease in the average use of water from 224 liters to about sixty-three liters in 1882 per head per day is explained in the fact that formerly the water was supplied without being metered, after a payment of a set yearly tax; while later, with the gradual introduction of water meters, it was sold exclusively by quantity. In 1878 the water meter was permanently installed throughout the city, and the quantity used diminished with great rapidity. The table shows further that the average use is growing both in the periods of least and of greatest demand. At present water is sold at fifteen pfennige a cubic meter. Aside from this a fixed water tax of four marks is levied quarterly on every property.

Even while the project for the enlargement of the Müggelsee plant was being made the daily use could be reckoned at 100 liters, but at the present time the highest use per inhabitant per day exceeds 130 liters. When it is taken into consideration that the use of water in each city necessarily increases with the growth of the city, and that in Berlin the higher portions of the city are more and more being taken up as residence districts where the establishment of private wells is impossible, it is seen that the consumption will grow to at least 160 liters. A later estimate gives the need of Berlin when it has 2,700,000 inhabitants as 430,000 cubic meters per day. Moreover, the suburbs of Weissensee Niederschöneweide, Treptow and Stralau, with an area of about 1,000 hectares, have been taken into the district supplied with water by the city. The future need of this district may reach 50,000 cubic meters per day, so that a safe supply in the times of greatest consumption will depend upon an ability to deliver 480,000 cubic meters per day. Inasmuch as at the present time the daily delivery of the present works is 260,000 cubic meters, it is evident that the creation of other establishments is a matter of pressing necessity. Beginnings have already been made in planning these extensions.

COPENHAGEN, DENMARK

By Dr. William Scharling, Copenhagen.

The water-works of Copenhagen are municipal. They were built in 1859 and have been several times enlarged because of the growth of the city (1855, 155,000; 1906, 426,000 inhabitants). A new system, yielding daily 17,000 cubic meters, is expected to be ready for work at end of 1908; at present the average daily consumption is 102.33 liters per head.

The water-work is high pressure work, ground water, with sand filtration. The water comes from bored wells, is without germs and of extremely good quality; the establishment of these works has been of great hygienic importance to the inhabitants of the city. Other hygienic amelioration contributing, the mortality of Copenhagen has been steadily decreasing: 1865-74 an average 261 per 10,000; 1875-84, 246; 1885-89, 221; 1890-94, 214; 1895-1900, 177.

The charges to consumers are partly based upon the area of building, partly by the tap and partly by meter. Meters are compulsory only for industrial use and for water closets, but appear to be very suitable. The charges have in 1905-06 given the municipality an income of 614,000 kroner (1 kroner equals 27 cents) ; the expenses have been 490,000 kroner. The works give thus a good profit on the amount invested. The capital bound up in the works is 9,480,000 kroner; they give thus an interest of more than 5 per cent.

The plans of extending the work will be ready in 1908, and are to furnish a high reservoir to contain 20,000 cubic meters.

STOCKHOLM, SWEDEN

By O. Nordenstrahl, Stockholm.

December 6, 1855, it was decided to supply Stockholm with water from the lake Malaren after the plans made by Captain F. W. Leijonancker, and for that purpose an appropriation of kronor 1,150,000 was provided. In the year 1858 the work was begun, and July 1, 1861, the plant was put into operation.

This first plant consisted of two vertical-balance steam-pumps with four boilers mounted in one engine-house, and one boiler-house, one administration building, three basins for sand filtration with a combined surface of 1,574 cubic meters, one pump-well with necessary pipes; the pipe system in the city and one high-pressure reservoir of 5,100 cubic meters capacity. The capacity was 5,000 cubic meters per diem for each pump.

As the population, and with it the water consumption, has increased, the plant has been added to, until it in 1898 consisted of four pumps with an output for each of 10,000 cubic meters, twenty-two open basins for filtration with a total surface of 17,710 cubic meters, four water reservoirs of 20,400 cubic meters capacity, and a line of pipes of 181,000 meters. The inside diameter of the pipes varied from 51 to 610 millimeters.

As the demand on the water-works still continued to grow, and for various reasons was found inadvisable to add new parts to the old plant, it was finally decided to build a new station at Norsborg, some twenty kilometers southeast of Stockholm, between the lakes Malaren and Bom. This latter lake is giving an exceptionally clear and good water, as it is surrounded by woods, and on one side is skirted by a gravel ridge from which several springs send their waters to the lake. The city bought the surrounding land in order to be sole possessor of the lake. In the years 1901-04 the new plant was erected here, comprising one tunnel to lead the water from the lake to the filters, three roofed sand filters of 1,550 cubic meters surface each, one pumping-well, engine and boiler-house, two horizontal pumps, driven by two double-cylindric engines, four boilers, electric power and lighting plant, administration building, seven houses for the functionaries, etc. In addition to this, there is a ground-water plant to take up the water from the stone ridge. This comprises two wells, thirty-three and eighteen meters deep, two electric pumps, and one iron filter to take the iron out of the ground water. This part of the plant yields 3,000 cubic meters, and the combined plant 33,000 cubic meters per diem. A cast-iron pipe, 102 centimeters in diameter, carries the water to a high reservoir of 18,000 cubic meters outside the city, and from this reservoir a pipe of 122 centimeters diameter conducts the water to the pipe system in the city. The supply of water available from these lakes is unlimited.

As to charges to consumers, each house owner pays for general use in the household and for each room in the house, two kronor per annum.

For other purposes the water is sold at 20-16 öre per cubic meter. The city, for the water used for its own purposes, credits the water-works with

12 öre per cubic meter. The average daily per capita consumption has been 100 liters with a maximum of 150 and a minimum of 53.4 liter.

Of water meters there were, in 1906, 2,100 in use, principally turbine meters of Siemen's & Halske's and Meinecke's construction. Another meter of French make has also been used. The experience has proved this to be the best way of distributing the water, the justest to the consumers and the only possible to prevent waste.

The public health has been directly proportional to the increasing water consumption and the improvement control of the source of supply.

The total consumption for 1906 reached 11,644,716 cubic meters. The pipe system was 238,330 meters in length, with a capacity of 26,132 cubic meters. The total value of the water-works is 16,042,759.83 kronor.

The income of the works in 1906 was 1,231,144 kronor, and the expenditure 888,872 kronor. Thus the profits for the same year netted 348,251 kronor toward payment of the debts.

The plans for improvement contemplate additions to the works at the lake Bom until they shall yield 100,000 cubic meters per diem.

UPSALA, SWEDEN

By G. Laurell, Upsala.

History of the Establishment of the Water Supply.—The Upsula waterworks were started in 1875, drawing their supply of water from the gravel ridge, at the foot of which Upsula is situated. The supply is abundant and widely known for its clear and healthful qualities. As the demand on the water supply has grown, new wells have been opened, the last addition having been made in 1905. The supply will probably be sufficient for any increase in demand that may be expected.

No charge is made to private consumers for water to fill household demands. An exception is, however, made for houses heated by water, for which a small annual sum is charged. Factories, buildings in erection and stables have also to pay annually for water consumed, the buildings in erection paying for water in proportion to the number of bricks in the building, and the stables paying in proportion to number of horses. The factories pay for the quantity of water as measured by meters.

The average daily per capita consumption for the years 1904 and 1905 has been 107 liter, and for the year 1906, 105 liter. So far water meters have only been used in the case of factories as mentioned above. At present only about 100 are in use.

The maximum capacity of the pumps is 120 liter per second. The length of pipe had at the end of 1906 was 33,700 meters, and the total value of the whole plant was 608,300 kronor. As the water is mostly delivered free of charge, the income does not cover the expenditure, the balance generally amounting to about 4,000 kronor annually.

The present supply is adequate to the immediate needs and there are consequently no plans for enlargement.

MADRID, SPAIN

By Chester Lloyd Jones, Ph.D., University of Pennsylvania.

The water supply of Madrid is furnished partly by the national government and partly by the city. The water is brought to the city limits from the River Lozoya, a snow-fed stream in the Guadarrama Mountains. This source of supply was brought to the city in 1858 by the central government and gave to Madrid for the first time an adequate supply of water. Up to that date shallow-dug wells were the sole resource. Since then the rapidly increasing population and increased use of water by public fountains and in irrigation have necessitated large additions to the original plant. The population supplied has grown in the period from 1855-1904 from 200,000 inhabitants to 560,000, and the superficial area supplied has increased from 700 hectares to 2,200. The water consumption per day has increased during the same period from 2,000 to 140,000 cubic meters. In proportion to the population this means a use of water at the present time twenty-five times greater than that in 1855. The price per cubic meter has fallen from one-eighth to one-forty-sixth that charged in 1855.

The supply is more than adequate for the needs of all but the higher portions of the city. Indeed, a comparison of the amount of water used in Madrid with that consumed in other important cities shows that only in New York and Rome is a larger amount consumed per inhabitant per day.[4] The daily consumption in Madrid amounts to 250 liters per inhabitant; in Rome, 1,000; in New York, 300; in Paris, 216; in London, 159; and in Berlin, 80.

From the first the method of adjusting water rates has been open to many abuses which have only recently been remedied. The City of Madrid is granted a certain amount free for public uses within her borders, and for all that used above that amount granted free the charge is at the rate of two and one-half pesetas for a supply of one hectoliter per day for a year. The charges within the city have been settled by the municipal government. Certain charitable institutions receive the water gratis and it is also supplied to public fountains without charge, but no individuals at the present time can legally receive such concessions. The water granted for public use is largely wasted as the city uses over 40,000 cubic meters per day. This laxness of administration is due to the fact that the charges for extra water for public use beyond the free grant are not enforced. It is said that in 1906 the city used over 40,000 cubic meters, though only a little over 6,000 were granted freely. For this additional amount no charge was levied against the city. The charge to individuals has, until recently, been based upon the number of faucets in use no matter what the quantity used. Meters are now being introduced, the charge varying from .30 pesetas down to .05 pesetas per cubic meter. This is a service equaled in cheapness by but few other large European cities.

The quality of the water is said to be excellent. The sources from

[4]Memoria sobre el Estado de los diferentes servicios. (Canal de Isabella II, p. 158· Madrid, 1907.)

which it is taken, far up in the mountains, are free from all bacteria and harmful chemical elements. The canal through which it is brought to Madrid, however, is uncovered, and an objectional amount of vegetable and animal matter finds its way into the water, necessitating sand filtration. Statistics showing the effect of the improved water service upon public health have not been collected, but officials claim a marked improvement in all hygienic conditions. The rapid increase in the population of the city, as noted above, it is claimed is due in large part to the excellent water supply.

The sources from which Madrid draws her supply promise to be ample for all growth in population for many years. The amount of water which can be delivered through the present canal can be increased to 300,000 cubic meters per day, equal to 600 liters per day per inhabitant for a population of 500,000, or 300 liters per day for a city of one million inhabitants—a figure at which Madrid will not arrive for several generations. Nevertheless there are plans to increase the possible water supply, while at the same time providing means for irrigation to the surounding country. The agricultural rejuvenation of Spain by irrigation, so much talked of, promises to bring in its wake a supply of water far beyond what the population of the metropolitan district will demand for ordinary municipal needs. A new set of canals from the Guadalix River is already in process of construction and will furnish an additional resource of six million cubic meters. Plans are also being made for a larger water supply to the high parts of the city and to the low-lying suburbs.

Infant Mortality in the American Cities

Compiled by George B. Mangold, Ph.D.

A SYMPOSIUM

New York City.—George B. Mangold, Ph.D., Expert, U. S. Department of Commerce and Labor.

Philadelphia.—A. C. Abbott, M.D., Chief of Bureau of Health, Philadelphia.

St. Louis.—Thomas A. Buckland, City Chemist, St. Louis, Mo.

Baltimore.—C. Hampson Jones, M.D., Assistant Commissioner of Health, Baltimore, Md.

Buffalo.—Ernest Wende, M.D., Health Commissioner, Buffalo, N. Y.

Cincinnati.—Samuel E. Allen, M.D., Health Officer, Cincinnati, O.

Milwaukee.—G. A. Bading, M.D., Commissioner of Health, Milwaukee, Wis.

Minneapolis.—P. M. Hall, M.D., Commissioner of Health, Minneapolis, Minn.

Providence.—Charles V. Chapin, M.D., Superintendent of Health, Providence, R. I.

Rochester.—George W. Goler, M.D., Health Officer, Rochester, N. Y.

The New York Society for the Prevention of Cruelty to Children.—E. Fellows Jenkins, Secretary and Superintendent.

INFANT MORTALITY IN THE AMERICAN CITIES.

Compiled by George B. Mangold, Ph.D., Expert, U. S. Department of Commerce and Labor.

The problem of infant mortality is rapidly becoming one of increasing interest and importance. Both here and abroad new methods of dealing with the subject have been introduced, and in some cases marked success has been achieved. In order to throw additional light upon the situation letters of inquiry have been sent to leading American cities for information

in regard to the conditions prevailing in each, and to the changes and reforms under contemplation. Among questions to which answers were especially desired were the following:

1. Is infant mortality increasing?
2. What children's diseases are being successfully overcome?
3. What progress has been made in the control of the milk supply?
4. Are steps being taken to educate mothers in the care of children?
5. Has the precise influence of certain factors, such as poor milk, unsanitary surroundings, neglect, mal-nutrition, etc., been worked out?
6. Are private agencies supplementing the work of the municipality, and, if so, in what way?

Reports from various cities follow. These include extracts from the letters received from the various health officials whose names are given and also their general summaries.

NEW YORK CITY

The mortality of children under one year of age in the old City of New York has steadily decreased during the last fifteen years. In 1891 the rate stood at 241.9 per 1,000, but fell to 191.7 in 1900. It has gradually declined since then and by 1906 had fallen to 167.8. The death rate for children under five has likewise decreased from 96 in 1891 to 54 in 1903. These changes are explained on the ground of "persistent sanitary supervision and preventive medical interference."

Several diseases have become increasingly subject to control. Measles, although still quite irregular in its rate of mortality has declined very largely since 1896 when quarantine was established. Scarlet fever, which was first quarantined in 1888, now causes less than one-fourth the percentage of deaths that formerly resulted. The new treatment of diphtheria and croup has had far-reaching effects. The case fatality has declined from about 40 per cent in 1892 to 10½ in 1903, while the actual rate of mortality is only one-third of that prevailing in 1894. Bacteriologic diagnosis was established in 1892, and since then cases have been more frequently reported. The use of anti-toxin since 1895 has been the most powerful cause of the declining death rates. Diarrheal diseases, confined largely to small children, have decreased 62 per cent since 1881. This is "attributable to a number of causes all operating in the direction of pure food and air, the most prominent among which are a supply of purer milk by reason of official watchfulness, the pasteurization of milk through the instrumentality of private philanthropic enterprises; the education of the mother and nurse as to the necessity of constant vigilance over the cleanliness of infants' food, especially the milk; the opening of small parks; clean streets; and the establishment of the floating hospital of St. John's Guild."

The inspection of milk is being made more rigid. Inspectors operate both within the city and among the dairies which contribute to the city's milk supply. Circulars of information are sent to mothers. The Strauss

milk depots dispense good milk, and in many ways charitable societies of the city are taking a part in the solution of the problem.

PHILADELPHIA

By A. C. Abbott, M.D., Chief of Bureau of Health.

The statistics of Philadelphia show considerable variations in the infantile death rate from year to year. The rates for the years 1903-05 were lower than those of preceding years, but how much of this advantage was due to the comparatively cool summers of these two years and to the activity exercised over the question of infant feeding it would be difficult to compute. Of the diseases of infants those that exhibit the most frequent and conspicuous decrease are the diseases of the intestinal canal.

Very decided progress is being made in the quality of the milk supplied, but that progress will never be very marked or satisfactory until the department of health is authorized by the state legislature to issue licenses to all individuals who are engaged in the milk trade, giving them, at the same time, power to revoke the license if the dealer does not conduct the business in conformity with sanitary precepts. An effort was made at the last session of the state legislature, as also at that of 1905, asking for such power, but it was denied us in both cases. I do not believe any permanent progress can be made until we have it in our hands to eliminate all incompetents from a business requiring technical training, and a business handling the most perishable commodity that comes to the community.

There is a continuous effort through the public press and charitable organizations, through district doctors, visiting nurses, etc., to educate mothers in the care of infants. The difficulty in this particular kind of work lies in the fact that all mothers who need the education are so densely ignorant that it is difficult to make an impression on them, and as many of them do not understand the English language, the difficulty is not lessened. This bureau distributes every summer, tracts in several languages, instructing mothers what to do, but whether they have any effect or not, I am, unfortunately, unable to say.

The municipality receives co-operation from practically all the charitable organizations and institutions, both in the way of instructions and in the way of material help to the poor. There is still, however, an opportunity for good that has not yet been fully realized. My belief is that a great deal of the money that is expended in what is called charity, is not expended wisely. My plan would be to have house-cleaning squads employed, who, under proper supervision, would go into tenements and into the slums, and not only instruct the people how to clean their houses, and the advantage of it, but who could actually pitch in and clean the houses themselves if the householders were not inclined to do it. I know of few charities that would be so far-reaching in their good effects as the one that I have just mentioned.

ST. LOUIS

By Thomas A. Buckland, City Chemist.

As a result of the enforcement of the ordinances regulating and controlling the production and sale of milk there has been a marked improvement noticed in the quality of the milk sold in the City of St. Louis. Chemical testing of milk will protect against watering, skimming, and the addition of preservative and other adulterants. It cannot, however, do very much in protection from unsanitary production and handling of milk. Dairymen and farmers of the present day are as a rule careless and indifferent, largely as a result of ignorance. There are dairies in which all the most modern sanitary precautions are observed, and St. Louis is fortunate to receive a small portion of her milk supply from such source. The quantity thus received is, however, small. The sanitary division of the health department uses its best efforts to compel sanitary conditions in the dairies located within the city limits. There is, however, a limit to the powers granted by the law to its officers in enforcing cleanliness. The most hopeful sign in the situation in this city is the existence of the above-mentioned small and gradually increasing number of sanitary dairies located in the country adjacent to St. Louis and contributing to the milk supply.

The St. Louis Pure Milk Commission has done much good work supplementing that of the city. It was organized in 1903 and follows the plan of the Strauss milk depots of New York City. Fifteen milk stations have been established, and a large quantity of modified and pasteurized milk is annually sold or distributed. In addition to the distribution of such milk for infant feeding, the commission has accomplished something towards the improvement of the general milk supply of the city; and at present there are three dairies that have all the rigid requirements of the commission and are now supplying their trade with "certified milk."

The infant mortality of the summer months between 1896 and 1904 was comparatively high, since then a decrease has occurred, part of which is undoubtedly due to the agencies working for purer milk.

BALTIMORE

By C. Hampson Jones, M.D., Assistant Commissioner of Health.

So far but fair progress has been made in controlling the milk supply. We hope in a short time that the city will make sufficient appropriations for us to supervise it at the seat of production in the country and at the points of distribution within the city. Private agencies have established milk distributing depots where milk is obtained by poor people at less than cost, the milk being properly cared for so that the bacteria count is low, and being given to the babes as soon after milking as possible. These agencies have been doing good work, and in conjunction with the work of this department will materially affect the death rate of children.

It is difficult to determine whether infant mortality has been decreas-

ing or not. Unless the exact number of children under one is known, the percentage cannot be calculated. Again, rates vary much from summer to summer, due to atmospheric conditions that affect the development of bacteria in milk. They have been low the past summer owing to a comparatively low temperature.

BUFFALO, N. Y.

By Ernest Wende, M.D., Health Commissioner.

Infant mortality is decreasing, owing to the following factors: (1) Dissemination of rules concerning infant care and hygiene, by the department of health and sent to each householder with infants. These circulars are printed in several languages and contain condensed information and instructions and are mailed to each mother when birth of child is recorded. When contagious diseases are reported, and inspector calls and leaves a circular pertaining to the subject. (2) Reduction of indirect and direct etiological features bearing on contagious diseases. (3) General increased enlightenment in sanitation.

The principal diseases upon which preventive measures have had most bearing are cholera infantum and the various enteric maladies and the infectious diseases of early life, principally scarlet fever and diphtheria.

The milk industry is supervised from source of supply to consumer. The following are the salient points of guard, viz:

1. Inspection of dairies, particularly in regard to conditions of herds, the presence of tuberculosis or bad udders among them.
2. Their food and water supply.
3. Condition of barn, method of cleanliness, general sanitation.
4. Care and cleanliness in milking, and method.
5. Care and cleanliness of utensils, cans, bottles, etc.
6. Time and method of cooling, hours of shipment and care in transportation.
7. Possibility of contagion from presence of contagious diseases of every kind at the farm, among the employees, and every possible source.
8. Supplying the farmer with charts—sanitary rules printed in large type on cloth, to be hung in a conspicuous place in dairy, also supplying him with circulars from time to time with sanitation rules and requirements.
9. The surveillance of city dairies. Demanding a strict adherence to a sanatory standard covering all points which, if lived up to, will minimize all deleterious possibilities.
10. Surveillance of the relationship between milk dealers and contagious diseases occurring on their routes. This is done by keeping a "tell-tale register" of the same. Each contagious disease as it is reported is charged up against the milk routes on which it occurs. This is scanned every day and when it appears that more than a certain number of cases appear upon the route of any one milkman, his entire establishment, product and source of supply, is instantly investigated, and when indicated, the estab-

lishment or its source of supply or both are closed. In this way incipient epidemics of scarlet fever, typhoid fever and diphtheria have been promptly detected and checked. But a few days ago (July 2, 1907), a case of smallpox was discovered on a route, and action immediately taken before consequences ensued. This "tell-tale register" is considered most valuable.

Private agencies are not supplementing the work of this department in the sphere to which attention is invited.

CINCINNATI

By Samuel E. Allen, M.D., Health Officer.

The proportion of deaths of children under two years of age to the total mortality has decreased considerably since 1886. In that year the percentage was 32.56, while in 1906 it stood at 21.92. Strenuous efforts have been made to place the milk supply upon a proper basis. The regulations that have been made are being vigorously enforced. They cover such points as the following: Permits to milk dealers; sufficient pasturage for cows; the regulation of the feeding of distillery waste, which is allowed under certain conditions and to a certain amount; the prohibition of sales of milk above a certain temperature; rules in respect to adulterated, skimmed, impure, and condensed milk; and in 1907 a regulation was adopted requiring dairymen who sell milk in the city to furnish certificates showing that their milk cows are free from tuberculosis or other dangerous diseases.

Aside from a circular issued to mothers in regard to the care of infants in hot weather, the department of health has made no efforts along educational lines, and probably private agencies have taken no steps toward the solution of this question.

MILWAUKEE

By G. A. Bading, M.D., Commissioner of Health.

After stating that the infant mortality of Milwaukee had shown a remarkable decrease Dr. Bading continues as follows: The diseases that are being especially wiped out are the acute infectious and contagious diseases, such as smallpox, diphtheria, and scarlet fever, which have practically been wiped out altogether among infants; and diarrheal diseases, which are diminishing rapidly from year to year.

As regards the control of the milk supply in the City of Milwaukee, we have, during the last year and a half, made progress in this respect. Our milk ordinance is a very stringent one, requiring tests for the percentage of solids, such as butter fats, as well as a bacteriological test, which fixes the standard at 250,000 bacteria per cubic centimeter. The carrying out of the provisions of this ordinance has resulted in furnishing to the city of Milwaukee a very good milk supply. Besides the ordinance which is in existence at the present time, we have now pending before the common

council an amendment with provisions requiring, among other things, a tuberculin test of every dairy animal from which milk is shipped to the city, fixing a bacteriological standard of cream, and demanding that milk sold in the City of Milwaukee shall be at a temperature of not more than 50° Fahrenheit.

The health department is distributing pamphlets, giving various rules and regulations as to the care of infants, particularly during hot weather. This question has been agitated in the daily papers to such an extent that we are receiving numerous applications for these printed copies.

As regards the precise influence of certain factors, such as poor milk, unsanitary conditions, malnutrition, etc., on the mortality rates among infants we are unable to furnish any definite information. No doubt the stringent supervision of the milk supply has had a marked influence. The other conditions have not as yet been worked out. About six months ago we succeeded in passing through the common council a tenement house ordinance which gives us control over the tenement conditions, and we no doubt will find that improvement in that respect will also have its influence. At the present time, private agencies are endeavoring to establish one or more fresh-air pavilions at the lake front for the care of infants during the hot summer months. These pavilions have, however, not as yet been erected, but the movement has progressed to such an extent that there is no longer any doubt that we will have them.

MINNEAPOLIS

By P. M. Hall, M.D., Commissioner of Health.

Infant mortality is decreasing, and the diseases which are slowly being suppressed are the various bowel troubles, such as cholera infantum, etc.

A bacteriological and chemical examination of milk is made in order to secure a good quality, and all cows are given the tuberculin test. When a birth is registered, the department of health sends to the mother a copy of a circular containing information in regard to the proper care and food of the child. The underlying causes of infant mortality have not, however, been worked out so as to make possible a determination of the precise influence of the chief contributing factors.

With the exception of what is done by associated charities and the outing association, private agencies are not supplementing the work of the municipality.

PROVIDENCE, R. I.

By Chas. V. Chapin, M.D., Superintendent of Health.

There has probably been a slight increase in the infant mortality. According to the records the rate for infants under one year of age has increased from 122 per 1,000 births in the period 1856-60 to 158 in the period

1901-05. A part of this increase, however, is not real but only apparent, but children of both American and foreign parentage participate in the increase. There has probably been a slight decrease in tuberculosis and the ordinary infectious diseases. An increase has been noted from influenza and diarrheal diseases. The latter may be due in part to increased artificial feeding. The milk supply, however, is being improved as rapidly as it is found possible.

The education given the mother consists of a circular of instructions which is sent to the parents of each child that is born. Last year and this a committee of physicians has been furnishing milk to infants on the plan developed by Dr. Goler, of Rochester. This summer the District Nursing Association is devoting one nurse to the care of infants. So far, however, not much has been done in the way of studying the various factors determining infant mortality.

ROCHESTER, N. Y.

By George W. Goler, M.D., Health Officer.

Infant mortality is decreasing in Rochester, and the records show that the number of children under one year of age dying during the decade ending 1896 was 4,975. For the following decade 3,421 deaths are recorded. Deaths of children under five have likewise declined from 2,476 to 1,544 for the corresponding periods. The figures show what Rochester has been able to accomplish in reducing its mortality among infants. The greatest gain is that for the months of July and August during which milk stations have been in operation since 1897. After the first year four stations were required for the needs of the city. Each one is in charge of a trained nurse who advises with mothers and dispenses milk to buyers. For two years the milk was pasteurized, then in 1899 the central station was established on a farm, and instead of pasteurizing milk all of the utensils, bottles, etc., were sterilized and clean milk put out. The work is carried on at an average expenditure of $1,000 a year for a season of two months.

The success attained in Rochester is not altogether due to the work of the milk stations, but is in part attributable to systematic work covering the inspection of all the producers' stables from which milk is drawn, to monthly bacteriologic examinations of all milk used, to an attempt to secure a low temperature of milk in the summer, and to the labors of the chemist and the chief milk inspector.

Smallpox, diphtheria, scarlet fever, and especially diseases of the respiratory tract, are declining and becoming less virulent, but just how much their lessening virulence is due to the heredity received from a long line of ancestors, and how much to the improved conditions of living, I do not know. While more children live and fewer die, many of those who live are growing smaller in stature, less robust and less able to successfully cope with the work of the world. In the children who survive we see the old latent effects of diseases. The ear marks of tuberculosis, due to

infection by milk, the red eye lids, enlarged glands, and various other marks of latent tubercular infection are noticeable.

Outside of the little pamphlet of instructions to mothers in respect to the care of babies, few steps are being taken to educate them upon this subject. In the Mechanics Institute a course of lectures is to be resumed this year on the hygiene of childhood similar to those begun by the writer a dozen years ago.

The municipality gets very little help from the work of private agencies. Not that private agencies are not doing a great deal, for they are, but the great difficulty with all work of this kind is the lack of co-operation. One set of people are interested in doing things for hygiene and nothing else; another set in looking after the sick; another, in furnishing milk and so on. I do not believe we can do much until we can have a kind of clearing house in which all kinds of relief work may be operated together.

NOTE.—Letters were received from several additional cities either stating that little or no work was being done along the lines indicated, or the replies were such that we have not been able to utilize them. A number of cities did not reply to our queries, and concerning them such information as we have given in respect to the foregoing cities cannot be recorded.

THE NEW YORK SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN[1]

The New York Society for the Prevention of Cruelty to Children occupies a unique position in the metropolis. It is at once a state agency and a private institution, a seeming contradiction of terms, but not so understood by those who know the causes underlying the granting of extraordinary legal powers to a private institution whose records are not public property. The action of the legislature in delegating such authority to the societies organized in New York under the Membership Corporations Laws is thoroughly approved by judges and jurists and was, indeed, held by the Court of Appeals of New York State to have been a wise public policy. The Society does a work of prevention, the extent of which is not only little known, but can probably never be fully understood by the general public. It is necessarily a quiet work, being of a more or less personal nature and requiring ceaseless attention night and day. The community at large will never know the number of rescues of children from neglect and abuse and unspeakable cruelties which are being continually made by the Society's agents in New York City alone. Annual reports and public statements can refer in but a very vague and general way to the breadth of the work and to the detail which can never be written. Almost three-quarters of a million of children have been involved in the investigations made by the Society's officers, and the welfare of each of them contributed to directly or indirectly in such a manner as to have improved their condition in some way. This

[1]Contributed by E. Fellows Jenkins, Secretary and Superintendent

"some way" may mean the absolute removal from improper guardians, the commitment to institutions of such as require reformation, or placing in suitable juvenile reformatories boys who have, through their own misconduct or the influence of others, become such as to require that sort of care. It may mean the releasing on parole of a larger number than was committed for any of the causes just stated. It is worthy of note that 400 societies in forty-four states of the Union are operating under laws based on those of New York for the prevention of cruelty to children. This is quite a remarkable condition, in view of the fact that the laws of most of the states on given subjects are widely divergent. The world has watched the progress in New York, the result of appeals to the higher courts from judgments made under the statutes whose passage was secured by the Society, and has, with remarkable unanimity, adopted these same statutes in toto, excepting with slight changes to meet local conditions.

The British Parliament, in considering the application of the eminent ladies and gentlemen who applied for a Charter for the National Society for the Prevention of Cruelty to Children, London, caused inquiry to be made of the conditions in New York, and of the strength of the laws which had been in operation here for thirteen years. A royal charter was granted to the great London Society, whose magnificent organization is such that no child in Great Britian or Ireland is too far away to be visited on short notice by an inspector of the National Society and its conditions improved, if need be. In Scotland a similar institution does a similar work, and so it is throughout most of the European countries, in India, South Africa, Australia, Tasmania and South America.

This Society's great work still lies as much in the prosecution of offenders against children as in the prevention of cruelty to them. The record of criminal prosecutions instituted by the Society, the startling number of convictions, the well-filled cells in the State Prison, speak more forcefully than statistics of the result of the work of prevention which had its origin in New York City. The work is not limited to the removal of children from unfit homes. Unfit homes there are, as there aways have been, and probably will be, and it is in these places that the Society finds its great opportunity. No one but the persons concerned can ever know what it means to visit a "home" of neglect and dissipation and miserable conditions, to administer an official warning, to return and find a partial improvement and as the visits continue, to see unclean rooms become clean ones, children better clad, and drunken parents become sober because they fear the law. "Moral suasion" is a fallacy with these people until the unfit guardians become more careful in their duties, not because of any kindly word spoken, but because of the fear which they entertain. Ignorant and vicious people must be compelled to do what is right by the strong arm of the law. But once this work of compulsion is begun, once these people undergo the unpleasant experience of being visited at uncertain hours of the day and night, once they realize that others will do for them that which they have neglected to do, they wake up to the fact that theirs will be the loss. Few fail to profit by it. The Society never removes a child from any home unless the case is a hopeless one. Removal,

in fact, is the last resort. But who will say that the little ones are not rescued when the Society steps in to take them from depraved and naturally unfit guardians? Who will object to a child's removal from a brothel and its transfer to proper surroundings? Who will say that little children should be permitted to be reared in scenes and homes of continual drunkenness?

NOTES

Aimes, Hubert H. S. *A History of Slavery in Cuba.* Pp. xi, 298. New York: Putnam's Sons, 1907.

The author in this volume gives a review of slavery in Cuba from 1511 to 1868. The chief emphasis is placed upon the slave trade and the discussion treats less fully political, economic and social questions related to the subject. The material is drawn from widely divergent sources, but the Archivos de Indias and the Biblioteca Nacional have not been relied upon so extensively as seems to be indicated in the preface. The study is, however, carefully made, and is the first detailed presentation of the subject. Though the conclusions of some of the chapters are vague, the author presents a mass of facts which will be welcomed by every student.

The economic necessity of negro labor in the eighteenth century and the successive waves of public opinion, half-hearted at first, working for the suppression of servitude in the nineteenth century, are well outlined. The same is true of the attitude of England toward the trade in slaves, the mistaken policy of the home government in handling the question, and the internal problems raised in the island itself. Two distinct services are rendered. A presentation of the economic effects of slavery within the island and a discussion of its international bearings. An appendix showing the price of slaves and a bibliography conclude the book.

Andresen, N. P. *The Republic.* Pp. 282. Chicago: Charles H. Kerr & Co. 1908.

Bartlett, Dana W. *The Better City.* Pp. 248. Price, $1.50. Los Angeles: The Neuner Company, 1907.

The author has for many years been the superintendent of the Bethlehem Institutions in Los Angeles, doing general social work. In this volume Los Angeles is really the text. He describes the forces making for a better city by picturing this city as it is and as it may be. Recognizing existing evils, he is still very optimistic for the future. His discussion is sane and stimulating, and should stir many workers in all cities toward greater things. Photographs of various scenes and institutions in Los Angeles give added local color. Constant reference is made to movements elsewhere as examples to be followed. The greatest defect of the book is the author's failure to discriminate in values. All organizations seeking to do social work are put on the same plane, and there is little indication that much that is done is badly done or were better not attempted.

Barton, James L. *The Missionary and His Critics.* Second Edition. Pp. 235. Price, $1.00 net. New York: Fleming H. Revell Company, 1907.

This very excellent characterization of the missionary and his work con-

vinces one that critical tourists, journalists, authors and foreign residents are often misleading in their information regarding foreign missions.

The author presents the testimonials of great statesmen, military officials, scientists and divines to confirm his statements that missionaries have preceded commerce, influenced government, introduced modern education, established a vast army of native Christian literary and educational workers, and revolutionized the ideas of womanhood, in all the strategic centers of the non-Christian world.

The social, economic and religious value of foreign missions in creating new civilizations is ably presented.

Bazaine, Mariscal. *La Intervencion Francesa en Mexico.* Pp. 283. Price, 75 cents. Mexico: Vda-de Ch. Bouret, 1907.

This volume of the series reproducing documents of Mexican history contains a well-selected list taken from the collection of the shifty General Bazaine, who, during the years 1863-67, backed by the French troops, was the dictator in Mexico. Almost without exception these writings are highly colored by the prejudices of their authors.

Beazley, C. R. *The Dawn of Modern Geography.* Vol. III. Pp. xvi, 638. Price, $6.50. Oxford: Clarendon Press.

In this third volume of his exhaustive history of geographical exploration and the progress of geographical science, the author covers the last and most important period. Taking up the narrative in the middle of the thirteenth century, where left by volume II (1901), the present volume includes the developments of the century and a half from the travels of the Elder Polos to the days of Prince Henry the Navigator. Between these two dates (1260 to 1420) are crowded the major part of the events the influence of which continued to be felt far into the modern era: the extraordinary series of efforts to develop the first real world intercourse largely by overland routes, followed by the beginnings of ocean commerce resulting from the discovery of the magnet, perfection of the compass and true maps.

In the period of overland trade and travel the author traces the advances made by the Polos and their successors, missionaries, adventurers, traders and pilgrims. Among these, of course, the adventures of the Polos must always hold the most interest. These narratives, however, assume different aspects under the critical analysis to which the author subjects them in arriving at their true worth as contributions to geography.

The maritime period includes only the very beginnings of actual voyages, hence its discussion occupies a minor place in the volume, along with the state of geographical theory up to 1420.

Three appendices, criticizing the literature of the subject and an exhaustive index, prepared and arranged with exceptional accuracy, add greatly to the value and utility of the volume as a reference work.

With the two preceding volumes, this book makes readily available much material heretofore widely scattered or entirely unobtainable. The author deserves great credit for such patient preparation of a standard and

permanently authoritative treatise on the early history of geographical exploration.

Bigelow, J. *The Panama Canal and the Daughters of Danaus.* Pp. 47. Price, 50 cents. New York: Baker & Taylor Co., 1908.

Bishop, A. L. *The State Works of Pennsylvania.* Pp. 297. New Haven, Conn.: Yale University. 1907.

Bogart, E. L. *Eonomic History of the United States.* Pp. xv, 522. Price, $1.75. New York: Longmans, Green & Co., 1907.

In reading the recent book by Professor E. L. Bogart, of Princeton University, one should bear in mind both the immense scope of the subject with which he deals and the purpose of the work. It is an "Economic History of the United States," and it is written for "high-school as well as college students." The scope necessarily involves a large number of economic subjects,—foreign and domestic commerce, westward migration, transportation, shipping, currency and banking, agriculture, manufacturing, mining, land, labor unions, industrial combinations and a score of others, each one of which constitutes a specialized field to which an entire volume might have been devoted. Professor Bogart has endeavored to select the chief events in the economic development of the United States, and to group them so as to constitute a continuous story. Both the scope of his work, and the desire to make it useful to the high-school student, bar all events which the author considered unessential.

Various other economic histories partially cover the same field, but most of them are either old or are confined to a smaller group of events. None answer the purpose aimed at by Professor Bogart.

The method pursued is to avoid the purely chronological by subdivision into concrete economic subjects, and yet to arrange events as much as possible according to periods of time. The book contains four parts: (1) Colonial Development, (2) The Struggle for Commercial and Economic Independence (1763 to 1808), (3) The Industrial Revolution and the Westward Movement (1808 to 1860), and (4) Economic Integration and Industrial Organization (1860 to 1906). Each of the thirty chapters, into which the economic history of the nation is subdivided, treats of a definite subject and is limited to a definite period of time.

To the student specializing in any particular branch of economic history, the book is of less value than many others. Its value lies in that it presents, in a connected form, the chief events which constituted the economic development of the United States "from the simple, isolated agricultural communities of the colonies to the complex industrial and commercial society of to-day."

Brown, S. *Alpine Flora of the Canadian Rocky Mountains.* Illustrated by Mrs. Charles Schäffer. Pp. xxxix, 353. Price, $3.00. New York: G. P. Putnam's Sons, 1907.

An increasing number of persons annually visit the Canadian Rockies during the summer months. Every student of that charming and instructive section

of country will wish to take with him the little book on the "Alpine Flora of the Canadian Rocky Mountains." Mr. Brown has given a concise, scientific and not over technical description of each important plant, and the volume is admirably illustrated by ninety-eight photographs and thirty-one reproductions of water-color drawings. Mrs. Schäffer has shown exceptional skill in drawing and in reproduction of color.

Browne, Haji A. *Bonaparte in Egypt and the Egyptians of To-day.* Pp. 410. Price, $3.00. New York: Charles Scribner's Sons, Importers, 1907.

The history of Egypt since 1798 offers an attractive field for investigation but one that has been most inadequately treated in the present volume. Since the author, to begin with, naïvely tells us that as a boy at school he found history "the dullest of dull tasks," and objects to histories, as they are written, we are scarcely surprised to find a total absence of reference to authorities or source material. Again, since we find that the purpose of the author is polemical rather than historical—to promote Pan-Islamism and to fight the various windmills that one finds on the wide horizon of nineteenth century Egypt, we cannot wonder at the lack of perspective that makes the Fashoda incident one of the six great events of 7,000 years of Egyptian history, yet fails to have the Suez Canal in the index, and so far as the present writer has been able to discover, in the text. In fact there is a distinct lack of clarity of any kind in the book; words are piled upon words with dizzying effect, evidently to the writer as well as the reader—as, for instance, when he tells us the Egyptians of to-day enjoy a "condition of social and political freedom not exceeded in any country of the world," then, four pages further, that they "have no representative government nor direct power." Indeed, this most seriously-minded volume becomes almost comic sometimes, as when the English Government of Pitt's day is denounced as one of the most brutal and brutalizing ever known, and infinitely worse than any that Egypt has ever had, and he who doubts the justice of this judgment is referred to Dickens' Barnaby Rudge. This is indeed a book that can hardly be taken seriously by anyone but its author; as a whole, the work is worthless to the scholar, and, for the most part, wearying to the general reader.

Bullock, C. J. *Selected Readings in Economics.* Pp. viii, 705. Boston: Ginn and Company, 1907.

Under the title, "Selected Readings in Economics," the editor has collected a wealth of economic material, historical, descriptive and theoretical. The volume is a compilation of treatises, each of which deals with a definite subject of general economic interest written by a specialist in the field. Some suggestive chapters are "American Agriculture," "The Manufacturing Industry of the United States," "Organization of Exchange," "International Trade," "Distribution of Wealth," "Socialism," etc. Among the noted contributors to the work are such authorities in their respective fields as Adam Smith, Bastiat, Jevons, James Wilson, Taussig, Andrew D. White, and the editor, C. J. Bullock.

As is stated in the preface, the "volume aims to supply the collateral reading needed for a general course of study in economics." The editor is to be congratulated on his excellent choice of subjects as well as of authorities. One feels in reading each of the various chapters that he has before him the last thing that has been said on the particular subject under discussion. Such a book cannot fail to fill an important place in the thorough presentation of a course in economics.

Butler, Nicholas Murray. *True and False Democracy.* Pp. vii, 111. Price, $1.00. New York: Macmillan Company, 1907.

The three addresses collected here under the title of "True and False Democracy" have a thread of common thought running through them, so that the book is, after all, a unit.

The problem of present democracy is to prevent exploitation and oppression of men. To do this it must develop a clear definition of public property. When this is done, government may well regulate public property, the individual control private property, and quasi-public undertakings be jointly cared for. To express the people's will, administration should be efficient; for a people is as truly represented by an efficient administration as by a legislature popularly elected. True democracy respects law and reverences authority. Socialism does not offer us a true democracy.

Calvert, T. H. *Regulation of Commerce under the Federal Constitution.* Pp. xiv, 380. Price, $3.00. Newport, N. Y.: Ed. Thompson Co., 1907.

The current discussion of the powers of the federal government and the states is illustrated by Mr. Calvert's work on the "Regulation of Commerce under the Federal Constitution." The book is a systematic text-book treatise beginning with an analysis of constitutional provisions, followed by a discussion of the general power of the United States and of the states. In part two the subjects of regulation are considered, attention being given to manufacturing and transportation companies and to highways of trade. Part three deals with state taxation as affecting commerce.

Campbell, R. J. *Christianity and the Social Order.* Pp. xiv, 284. Price, $1.50. New York: The Macmillan Co., 1907.

The author attempts in this volume "to show the correspondence between the principles of Christianity and those of modern Socialism—Socialism in the best sense of the word."

In this work the existence of churches is justified by their realization of the Kingdom of God, which is interpreted as "the reconstruction of society on a basis of mutual helpfulness." Primitive Christianity in its practical aims is considered identical with modern Socialism. Socialism is regarded as "the practical expression of Christian ethics and the evangel of Jesus."

In accord with these interpretations, the author very ably discusses the relation of the Churches to the masses, the Kingdom of God in primitive and present-day Christianity, the common objective of Christianity and Socialism, the socialization of natural resources and industry, and the socialized state.

Colson, C. *Cours d'Economique Politique.* Vol. VI. Pp. 528. Price, 6 fr. Paris: Gauthier-Villars, 1907.

Reserved for later notice.

Craig, Neville B. *Recollections of an Ill-Fated Expedition.* Pp. 479. Price, $4.00. Philadelphia: J. B. Lippincott Co., 1907.

Just thirty years ago contracts were signed by the old firm of P. & T. Collins, railroad contractors, of Philadelphia, binding them to build the Madeira and Mamoré Railroad which was to open Bolivia to the world's commerce. It is the history and vicissitudes of this enterprise which is now for the first time given to the public in an authentic and highly entertaining form. The book will hold much interest for Philadelphia in particular, since the undertaking was so largely in the hands of its citizens. For the general public the book is especially timely because of the recent treaty concluded between Brazil and Bolivia, whereby the latter is bound to construct the road.

Bolivia is a nation of vast resources, both in mineral wealth and in agricultural possibilities, the development of which has always been hampered by the inaccessibility of the country. It is upwards of 2,000 miles by river to the mouth of the Amazon, some 200 miles of this distance being unnavigable, except for canoes. To overcome this difficulty in communication by the construction of a railroad from San Antonio, Brazil, to Guajará-merim, Bolivia, and give to the United States the tremendous advantage of controlling the vast commerce of the region, were the dreams of the promoters under the leadership of Colonel George Earl Church. The records of heroic attempts made make one of the most interesting of all the tales told of American pluck, perseverance and resourcefulness. Aside from the general interest in the narrative itself, the chief item of present significance is probably found in the struggle against the tropical climate. The book certainly furnishes an object lesson in the probable outcome of the tropical ventures undertaken without sufficient support and necessary precautions.

The single false note in the book appears in a rather pointless digression to attack the policy of the Spanish-American War and to belittle the deeds and merits of the army men. Mr. Craig adds nothing to his case by an invective against the late war, and the army in general, which sounds much like the venting of a personal grievance. The book is decidedly worth reading, giving a chapter of the past unfamiliar to the general public to-day, and recording one of the few failures of American enterprises. A half dozen excellent maps and diagrams explain the geography of the region. The participants in the ill-fated enterprise are to be congratulated in having such an able historian from among their own number.

Crane, R. T. *The State in Constitutional and International Law.* Pp. 78. Baltimore: Johns Hopkins Press, 1907.

Davis, Richard Harding. *The Congo and the Coasts of Africa.* Pp. xi, 220. Price, $1.50. New York: Scribner's Sons, 1907.

The reader who wishes to be entertained will find this book one hard to

lay down. He who reads to get information on the subjects covered by the title will be greatly disappointed. One of the objects of the author's trip to Africa was to investigate the atrocities in the Congo, and over half the book is spent in declamation against Leopold's rule. But Mr. Davis admits he saw none of the cruelties about which he writes. He went up the Kasai River to visit the rubber plantations, but finding they were four days' journey from the end of the steamboat line he returned without seeing them.

Repeatedly the language used is little short of invective. The volume is full of flat contradictions. After detailing the enormous profits reaped by the king we are assured that "were the natives not sweated so severely he . . . would be a bankrupt." Mahogany is shipped as squared timber, but the pictures of the loading into the ships all show the logs as unhewn. Instances similar to these could be multiplied indefinitely.

Densmore, Emmet. *Sex Equality.* Pp. xx, 390. Price, $1.50. New York: Funk & Wagnalls Company, 1907.

"The basic idea of this book is the fundamental and ultimate equality of the human ego, whether embodied in the one or the other sex; and the aim of these pages is to explain the nature of this equality and to promote its practical realization." The author seeks to show that practically all the differences between the sexes are of man's creation and are not necessary. In so doing he reviews the biological evidence and discusses at length the various writers upon the proper sphere of woman. This is perhaps the most valuable part of the book. He believes that woman should enter freely all works of life; that her physique should be the equal of man; that the sexes should be educated together. Whether all of his conclusions are sound or not; whether, indeed, there is really any woman problem, and hence any solution may be questioned. However, we have here a sane and serious discussion of many problems affecting woman which deserves attention. To illustrate his statements many portraits of famous women are reproduced.

Dick, Stewart. *The Heart of Spain.* Pp. 155. Price, $1.25. Philadelphia: G. W. Jacobs & Co., 1907.

This is a description of a Spanish town by an artist who has the power of painting with words as well as with the brush. The "Heart of Spain," to the author, is the City of Toledo, and the graphic way in which the grim old capital is shown to epitomize the life history of the peninsula justifies the choice of words. The book is avowedly a series of personal impressions, not a guide book, yet one could use it for the latter purpose and get a much better insight into the spirit of the place than by seeking the list of double-starred attractions usually brought to the attention of the tourist.

Fastrez, A. *Ce que l'Armée peut être pour la Nation.* Pp. 294. Paris: Chevalier & Rivière, 1907.

Fisher, Irving. *The Rate of Interest.* Pp. xxii, 442. Price, $3.00. New York: Macmillan Company, 1907.

This is a notable work. The main body of the discussion lends itself to a

three-fold grouping. The first three chapters criticise briefly some previous theories of interest. In a fourth chapter the author analyzes Böhm-Bawerk's constructive work, finding himself in thorough accord with that author's fundamental proposition, but the claim is made that Böhm-Bawerk commits a serious error in claiming a "technical superiority of present over future goods." Professor Fisher claims that the difference is referable to the discount principle when that principle is properly interpreted. In Chapters VI to XI, the author presents his own theory, which is, in short, the discount principle of Böhm-Bawerk purged by the author and worked out in relation to rather novel concepts of both capital and income. His capital concept embraces the entire stock of wealth (including man!) existing at an instant of time, while he conceives income to consist of the services that flow from this stock of wealth through a period of time. Chapters V, and XII to XVII show how changes in the price of the monetary standard affect the rate of interest, and discuss briefly the relation of the interest rate to the distributive problem in general. A seven-page glossary and mathematical appendices covering 190 pages and adding, the author says, "something not expressible, or at any rate only imperfectly expressible, in ordinary language," complete the book.

However, Professor Fisher has made an enduring contribution to the progress of economic thought in emphasizing the peculiar psychical relation which the value of income sustains, through the principle of discount, to the value of capital. On the other hand, it is quite likely that his concept of capital and his concept of income will not prove to be important aids to the understanding of this relation, while his general view of the problem of distribution, as stated in the few brief paragraphs devoted to that subject, will hardly commend itself to most scientists working in the same field. Again, the author renders an important service in selecting Böhm-Bawerk's idea of "the technical superiority of present over future goods" as perhaps the most unsatisfactory part of that writer's theory of interest. However, Professor Fisher has by no means given Böhm-Bawerk's error the proper correction, and as between Böhm-Bawerk's error and Professor Fisher's correction of the error the former is nearer the truth. Finally, in his discussion of appreciation and interest the author again makes, as he did in 1896, a splendid contribution to clear thinking on a subject which befuddles many minds. Professor Fisher's volume should certainly be in the hands of every serious student of economic theory, for it will stimulate even where it fails to convince.

Garcia, G. *El clero de Mexico durante la dominacion Española.* Pp. 269. Mexico: Ch. Bouret, 1907.

Goddard, P. E. *The Phonology of the Hupa Language.* Part I. Pp. 20. Price 35 cents. Berkeley: University of California Press, 1907.

Griffith, Elmer C. *The Rise and Development of the Gerrymander.* Pp. 124. Price, $1.25. Chicago: Scott, Foresman & Co., 1907.

This doctor's thesis is a painstaking investigation of the part played in American politics by the gerrymander up to 1840. Many of our most

careful historians have written of the gerrymander in the belief that it first appeared in the election of 1812, in Massachusetts. Mr. Griffith shows that it is nearly as old as the practice in America of popular election by districts. The first known appearance of the practice is found in Pennsylvania as the result of the formation of assembly districts in 1705. Curiously enough the unequal political division then made depended upon a provision of Penn's charter of 1701, the original object of which was to give justice to the country districts by preventing their domination by Philadelphia.

Sixteen instances of gerrymanders are discovered before 1812. The reputed gerrymander of Virginia in 1789 is discussed at length. The author concludes that the charge made against Patrick Henry that he thus tried to defeat Madison's candidacy for Congress is unsubstantiated.

The famous Massachusetts gerrymander only brought into public attention a practice already familiar to the politicians. The subsequent gerrymanders in various states and the attempts made in state constitutions to eliminate the practice are reviewed in detail. The author has made diligent inquiries in the source material and has supplemented this by liberal use of the monographic work of other students in related fields.

Gutzeit, P. *Die Bodenreform.* Pp. 142. Price 3 m. Leipsic: Duncker & Humblot, 1907.

Hale, Albert. *The South Americans.* Pp. 361. Price, $2.50. Indianapolis: Bobbs-Merrill Company, 1907.

Mr. Hale's book is interesting. A long experience in South America has allowed him to make many acute observations on South American life and tendencies. He will give the average reader a better appreciation of the south continent and the peoples, but with all this there is still much to be desired. There is no unity of treatment. The first chapters, in general character and in their detail suggest too much the red-bound guide-book. The later ones have too much of the history of battles and presidents, and throughout the book one is constantly impressed with the fact that the author writes so much from the point of view of the interested observer that the real life of the country is presented only in occasional glimpses. Repetitions are frequent, and the ever-recurring comparisons between South Americans and ourselves are often trite. The difficulty of writing a book covering so large a field, even from a single viewpoint, does not prevent the author from including much negligible detail. It is a book to entertain rather than to study. There are numerous excellent reproductions of photographs of typical South American scenes.

Hall, H. M. *Compositae of Southern California.* Pp. 302. Price, $3.00. Berkeley: University of California Press, 1907.

Hanna, H. S. *A Financial History of Maryland (1789-1848).* Pp. 131. Baltimore: Johns Hopkins Press, 1907.

Herbertson, A. J. and F. D. *The Oxford Geographies.* Vol. III. Pp. 363. Price 2 *s.* 6 *d.* Oxford: The Clarendon Press. 1907.

Hernandez, A. M. *Politica Sociológica Hispano Americana.* Pp. 57. Caracas, Venezuela: Tipografia Americana, 1907.

Higginson, Thomas Wentworth. *Life and Times of Stephen Higginson.* Pp. 306. Price, $2.00. Boston: Houghton, Mifflin & Co., 1907.

Stephen Higginson, the subject of this memoir by his grandson, was a prominent and influential Boston merchant during the formative period of the American Republic. Born in 1743, married and in business for himself at the age of twenty-one, he lived until 1828, and during the most exciting part of this long period was active in local and continental politics. He was one of the American merchants examined before the House of Commons in 1774 on the subject of American fisheries, a member of the Continental Congress from Massachusetts in 1783, one of the principal actors in the successful suppression of Shays' Rebellion, and probably the first person to suggest that the Constitution of 1787 should go into effect when ratified by nine states. His aptitude for public affairs made him one of the leaders of the Massachusetts Federalists and an active member of the famous "Essex Junto." His assistance in the organization of the American navy was considerable. The author of the memoir rightly concludes that these reasons are sufficient to justify the appearance of a life of Stephen Higginson.

The principal source materials used by the author were the letters of Higginson, a collection of which was printed in the annual report of the American Historical Association for 1896. These are quoted so constantly and fully that the volume turns out to be little more than the public correspondence of Higginson rather than a well-digested and well-written memoir. The comments and explanations of the author are usually illuminating, though occasionally inaccurate as, for example, when it is stated that Higginson was "the first to organize and equip the American Navy under Jefferson's administration;" the navy was organized, and Higginson's work in connection with it done, prior to Jefferson's administration.

Hrdlicka, A. *Contribution to the Physical Anthropology of California.* Pp. 16. Price, 75 cents. Berkeley: University of California Press.

Hrdlicka, A. *Skeleton Remains in North America.* Pp. 113. Washington: Government Printing Office, 1907.

Hulbert, A. B. *The Ohio River: A Course of Empire.* Pp. xiv, 378. Price, $3.50. New York: Putnam's Sons, 1906.

Professor Hulbert has added another volume to his many popular works on American highways. This volume on the Ohio River is partly an historical work and partly a story of adventure. Its purpose is undoubtedly to strengthen the enthusiasm of the people of the Ohio Valley for the noble river and for the magnificent country drained by that great stream. The volume will appeal most strongly to the antiquarian and to those who have a personal and local interest in the region described.

Huntington, E. *The Pulse of Asia.* Pp. xxi, 415. Price, $3.50. Boston: Houghton, Mifflin & Co., 1907.

Reserved for later notice.

Jacquart, Camille. *Statistique et Science Sociale.* Pp. 120. Brussels: Desclée, de Brouwer & Cie., 1907.

This little treatise is a brief discussion of the subjects of theoretical statistics. It comprises four chapters devoted respectively to administrative statistics, statistics as a science, method, and difficulties in the interpretation of statistical data. The chief questions considered by the author are: what importance can we attach to statistics and to what extent can conclusions be drawn from them. He points out some of their definite limitations, the role which they can play, and does not hesitate to condemn defects in method regardless of the support they may have received. The value of the subject as an aid to the study of social science is maintained.

Kenny, C. H. *Outlines of Criminal Law.* (Revised and adapted for American scholars by James H. Webb.) Pp. xxi, 404. Price, $3.00. New York: The Macmillan Company, 1907.

The editor has taken a well-known English text and prepared it for use in America by introducing citations to American cases with such other changes as our different legal system makes necessary. Law students and all interested in criminology will find the book of great value, even if it does no more than reveal the hopelessly inchoate condition of all our penal legislation.

Knight, E. F. *Oversea Britain.* Pp. 324. Price, $2.00. New York: E. P. Dutton & Co., 1907.

This is a careful description of the British colonies in the Mediterranean region, Africa and America, to be followed by a volume on the possessions in Asia and Oceania. The author has adopted a semi-encyclopedic manner of discussion. Each colony is treated in its history, resources, population and general position in the politics of the empire. National bias is avoided and the maps and statistics offered are clear and up to date. Wide travel in the countries discussed has been used to the best advantage to make the book a record of observation as well as a compendium of facts. The book is a valuable contribution to the literature on British world politics.

Knight, W. (Ed.) *Memorials of Thomas Davidson.* Pp. 242. Price, $1.25. Boston: Ginn & Co., 1907.

Kroeber, A. L. *Indian Myths of South Central California.* Pp. 84. Price, 75 cents. Berkeley: University of California Press, 1907.

Lea, H. C. *The Inquisition in the Spanish Dependencies.* Pp. xvi, 564. Price, $2.50. New York: Macmillan Co., 1908.

Reserved for later notice.

Lemberger, H. *Die Wiener Wäsche-Industrie.* Pp. 234. Price 5 m. Leipsic: F. Deuticke, 1907.

Liefmann, R. *Ertrag und Einkommen auf der Grundage einer Rein subjektiven Wertlehre.* Pp. 72. Jena: G. Fischer, 1907.

Marx, K., and **Engels, F.** *Manifests of the Communist Party.* Pp. 65. Chicago: Charles H. Kerr & Co., 1908.

McKenzie, F. A. *The Unveiled East.* Pp. viii, 347. Price, $3.50. New York: E. P. Dutton & Co., 1907.

Reserved for later notice.

Miller, E. I. *The Legislature of the Province of Virginia.* Pp. 182. Price, $1.50. New York: Columbia University Press, 1907.

Morris, Charles. *Home Life in all Lands.* Pp. 316. Price $1.00. Philadelphia: J. B. Lippincott Co., 1907.

The teaching of geography to the young student, even at the present time, is all too often confined to the time-worn, senseless topics of boundaries, cities, products and animals of the various countries of the world. In one of the most pretentious of recent school geographies where it is declared "the central thought is man," man receives the least attention of all. This present little volume gives in a connected story much of the human side which is either omitted or buried in the usual text. As a supplementary reader it is admirably adapted to the young student, giving a view of geography which is very much alive. The plan of dividing the discussion into chapters on food, dress, homes or habitations, occupations, etc., even though it should add nothing to what the average geography tells under the head of separate countries, must mean a more ready grasp of the subject by young minds.

Munro, D. C., and Sellery, G. C. (Editors). *Medieval Civilization.* Pp. x, 594. Price, $2.00. New York: The Century Company, 1907.

This is the second edition of a book which has proved itself very useful to both students and teachers of medieval history. It consists of free translations into English of select passages from standard French, German and Italian authors. The majority of the selections illustrate phases of medieval culture.

The book is designed to help solve two pedagogical difficulties. In the first place it enables students who cannot read foreign languages to get at some of the results of continental European scholarship. Secondly, it enables large classes in history to do collateral reading without obliging libraries to duplicate numerous expensive books.

The enlargement in this new edition consists of the addition of some 200 pages of selections which illustrate especially the intellectual life of the twelfth and thirteenth centuries. The rest of the book is unchanged.

Peary, R. E. *Nearest the Pole.* Pp. xx, 411. Price, $4.80. New York: Doubleday, Page & Co., 1907.

Commander Peary, upon the return from his Arctic expedition in 1906, prepared an excellent account of the attempt he made in 1904-05-06 to reach the Pole. The story of how he attained a point farther north than had been previously reached by any of the many intrepid explorers of the North is told in his forceful narrative style. The book will appeal strongly not only to students of geography, but to all those for whom heroic endeavor has a fascination.

Plechanoff, G. *Anarchism and Socialism.* Pp. 148. Chicago: Charles H. Kerr & Co., 1908.

Pratt, E. A. *Organization of Agriculture.* Pp. 402. Price, $1.50. New York: E. P. Dutton & Co.

In twenty-four chapters, the author treats the recent development and present status of organization in agriculture, in as many separate countries. In these old-world countries agricultural combination has never been the result of extraordinary prosperity; on the other hand, it has been resorted to as the last hope of the peasants. The invasion of old-world markets by new-world products was the whip that, in general, drove the farmers to co-operation. Paramount among the co-operative societies that have succeeded and resulted in good are: co-operative credit systems and rural banks; co-operative buying syndicates; and sale associations. Agricultural education is largely in the hands of co-operative societies in many countries. Especial attention is given to the lot of the British farmer, and a chapter is devoted to discussing the relation of railroads to farmers.

Richmond, Mary E. *The Good Neighbor in the Modern City.* Pp. 152. Price, 60 cents. Philadelphia: J. B. Lippincott Co., 1907.

Rollins, M. *Money and Investments.* Pp. xxxvi, 436. Price, $2.00. Boston: Dana, Estes & Co., 1907.

Mr. Rollins' book on "Money and Investments" is a brief compendium of information needed by investors and students of finance. The information is presented in a dictionary and cyclopædic form. The book is accordingly intended solely for reference. The general reader, however, will find it well worth while to study the five brief chapters in the "foreword," in which the author discusses investment, speculation, and banks, and concisely presents data on other important topics.

Root, Elihu. *The Citizen's Part in Government.* Pp. 123. Price, $1.00. New York: Chas. Scribner's Sons, 1907.

Four Yale lectures on the "Responsibilities of Citizenship" are gathered here: (1) The Task Inherited or Assumed by Members of the Governing Body in a Democracy,—which is to see that the organization which controls the circumstances under which men live, in cities and states, shall be well run. (2) The Function of Political Parties as Agencies of the Governing Body,—to bring forward and work out political questions. (3) The duties of the Citizen as a Member of a Political Party,—to make the party what it ought to be, and to work with other members of the party to choose the best leaders. (4) The Grounds for Encouragement,—the growth of the Civil Service systems; less political corruption than formerly; the development of a sense of public responsibility shown in increased hospital facilities, asylums for the insane, etc.; the prohibition of lotteries; the prevention of railroad discriminations. "Thirty or forty years ago . . . the things done by corporate managers were so much worse that the Chicago and Alton affair would not have received any notice at all." Election reform, the growth of institutions of education, the agitation for a more equitable divi-

sion of wealth—all mark the progress made in recent years, along political and educational lines.

Roquenant, A. *Patrons et Ouvriers.* Pp. 181. Price, 2 fr. Paris: Victor Lecoffre, 1907.

This book contains a discussion of the relations between employer and employee in France. It represents the unfavorable conditions under which the workingman of to-day lives, discusses the strike, apprentice, conditions of woman labor, use of intoxicants, and emphasizes the moral responsibility resting upon both parties in the industrial strife. Much of the value of the book depends upon the importance which it attaches to moral standards in economic life.

Salmond, J. W. *Jurisprudence.* Second edition. Pp. xv, 518. London: Stevens and Haynes, 1907.

This excellent work of an Australian jurist has already won itself a place in the literature dealing with the theory of the law. It aims to outline the general theory of law, the framework upon which all systems of law must be built. Such books are valuable not only to the student who wishes a foundation upon which to build the structure of concrete legal principles, but also to every practitioner who desires to see more clearly the organic unity which runs—or should run—through the national systems of law.

The discussion is always clear, and with a few exceptions, for example, the argument on Retributive Punishment (p. 80), convincing. At the end of each chapter is given a good selection of references on the subjects discussed. The present edition eliminates portions of the earlier one dealing with the practical application of law rather than its theoretical basis, and adds an interesting chapter to the much controverted subjects of the nature of the law of nations and of the law of nature. The author makes no definite contribution to either discussion, his object being to interpret both theories. By inference, it may be seen he leans toward the views of Sir Henry Maine.

Schatz, A. *L'Individualisme.* Pp. 590. Price 5 fr. Paris: A. Colin, 1907.

Scott, James T. *The Sexual Instinct.* Second edition. Pp. 465. Price, $2.00. New York: E. B. Treat & Co., 1907.

The first edition was published some ten years ago. In this edition, the chapter on "Perversions" has been dropped and two chapters added. The balance of the text is practically unchanged, and little new evidence is included. A wide range of subjects is included. The discussion is fair, and extreme positions are generally avoided. The latter half of the book, in which special attention is paid to the venereal diseases and their effects, is much better than the earlier sections. These first chapters, devoted to the personal and social results of immorality, are rambling, contain many repetitions and are at times preachy. They could be rewritten to advantage. The latter part often goes into so much of anatomical detail that the ordinary reader would scarcely grasp the argument. It is a book for the adult rather than the youth.

Shambaugh, B. F. (Ed.) *Proceedings of the Fiftieth Anniversary of the Constitution of Iowa.* Pp. 454. Iowa City: State Historical Society, 1907.

Shufeldt, R. W. *The Negro: A Menace to American Civilization.* Pp. 281. Price, $1.50. Boston: R. G. Badger, 1907.

It is discouraging to find a retired major of the medical service of the United States Army, claiming to write from a scientific standpoint, but violating every canon of scientific method. Major Shufeldt evidently has a bad attack of negrophobia. In his book he rants from cover to cover. His favorite comparison is to liken the negro to a skunk. Purporting to be an anthropologist he speaks of the negro as essentially without morals. (Sic!). Hence he argues attempts to improve them are idle. The only thing to do is to ship them, one and all, out of the country. Unfortunately, this the author thinks will not be done, but if it is not, then amalgamation will ultimately result, and America will go down in ruin. To this end the author firmly believes we are destined in spite of his efforts to save us. The illustrations fit the text. The frontispiece, a negro's skull; frontal and lateral views of nude negroes (photos by the author); and some eight or nine reproducing scenes connected with the burning at the stake of a negro ravisher. The last hundred pages are composed of newspaper clippings, giving evidences of race prejudices of various public men.

It is difficult to see what the author hopes to accomplish. He will not influence the scholar, for his discussion is grossly unfair and unscientific. He may inflame the public mind, but the intelligent reader will be repelled rather than convinced. Doubtless those who are seeking every pretext to condemn the negro will hail the book as a great scientific production. Careful students, administrators, educators already perplexed by the problems of race contact, will find no help in the volume.

Sinzheimer, H. *Der Korparative Arbeitsnormenvertrag.* Pp. 132. Price, 3.20 m. Leipsic: Duncker & Humblot, 1907.

Smith, J. H. *Our Struggle for the Fourteenth Colony.* Two vols. Pp. 1271. New York: G. P. Putnam's Sons, 1907.

Reserved for later notice.

Snedden, David S. *Administration and Educational Work of American Juvenile Reform Schools.* Pp. 206. New York: Columbia University, 1907.

This volume, by Professor Snedden, of Teachers' College, Columbia University, is a helpful study of the problems which lie in that borderland between education and penology. The disappearance of the old prison discipline, the rise of the cottage system with its added possibilities of classification, better physical and moral care, vocational training both agricultural and industrial, the increased use of libraries and other aids to character-building, and, finally, the perfection of the parole system,—all are carefullv discussed, both historically and comparatively.

Snyder, C. *American Railways as Investments.* Pp. 762. Price, $3.20. New York: Moody Corporation, 1907.

From time to time works appear summarizing the main facts regarding the leading railway systems of the United States. This book is written primarily with reference to the investor who is seeking information regarding the properties whose securities he may desire to purchase or to sell. Mr. Snyder has preceded his discussion of the subject of railroad investments by an introduction of sixty pages in which he defines the terms used in the study of railway investment and explains the factors affecting the earnings and stability of railroad properties. The introduction, however, is so brief that it is not a satisfactory discussion even of the elementary principles of railway finance. Likewise, the summary of the main factors regarding each railroad is so short that it yields but little more information than is to be obtained from Poor's Manual of Railroads. Mr. Snyder's book is useful, but not indispensable.

Sprague, R. F. *The True Nature of Value.* Pp. 178. Price, $1.00. Chicago: University of Chicago Press, 1907.

Steiner, Edward A. *The Mediator.* Pp. 356. Price, $1.50. Chicago: F. H. Revell Co., 1907.

This is a story of a half-orphan Jewish boy, born in southern Russia, who ultimately becomes a Christian. Owing to Russian persecution, the hero comes to America, works for a time in sweatshops, but finally enters social work, and wins the love of a wealthy girl. As a novel the story is not strong. Probably no one in America understands the complex situation of the Russian Jew better than Professor Steiner. His description of the situations in which the boy finds himself, the pathetic sorrow of the old orthodox father is excellent, and the reader feels that the author knows the facts. In general, it does not seem that this volume begins to have the value of the author's earlier book "On the Trail of the Immigrant," but it is his first attempt at fiction and may, perchance, interest many who will not read a more serious work.

Stelzle, Charles. *Christianity's Storm Center.* Pp. 240. Price, $1.00. Chicago: Fleming H. Revell Company, 1907.

The author, skilled laborer, minister, superintendent of the Department of Church and Labor of the Presbyterian Church, is interested in aggressive evangelism, and believes that the Church should so change its methods as to meet present needs. The problem is not properly stated by asking, "Do workingmen go to Church?" but by the query, "Does the Church go to the workingman?" The chapters bear such titles as: "The Trades Union;" "The City Slum;" "Social Centers;" "The Institutional Church;" "Aggressive Evangelism." The discussion is, however, extremely rambling and decidedly lacking in logical order. Nevertheless, the book is of rather exceptional merit. Here is a man, at his best when writing of the labor movement, who knows his subject and has something to offer. Every Church worker would do well to read carefully and weigh his many positive suggestions. If

the Church fails to profit by such a book it speaks badly for its own future influence.

Sundbarg, G. *Bevolkerungsstatistik Schwedens (1750-1900).* Pp. 170. Stockholm: P. A. Norstedt & Söner, 1907.

Tenney, Alvan A. *Social Democracy and Population.* Pp. 89. Price, 75 cents. New York: The Columbia University Press, 1907.

As a "preliminary skirmish in the field," of the subject designated, the writer has been notably successful. We are too tardily awakening to the requisites necessary for the establishment of real social democracy. The biological factors involved supply the burden of the author's exposition, and such topics as the increase of population and social stability, modes of selection, degeneration and supply of brains, are all lifted into this larger theme. The maintenance of social democracy, he justly contends, requires an increase in population less rapid than the rise of the standard of living. Nor does a slower increase necessarily imply deterioration. A final chapter is devoted to the application of the problem to American conditions.

de Tourville, H. *The Growth of Modern Nations.* Translated by M. G. Loch. Pp. 508. Price, $3.50. New York: Longmans, Green & Co., 1907.

Reserved for later notice.

Underwood, J. H. *The Distribution of Ownership.* Pp. 218. Price, $1.50. New York: Columbia University Press. 1907.

Untermann, E. *Marxian Economics.* Pp. 252. Chicago: Charles H. Kerr & Co., 1907.

Watkins, G. P. *The Growth of Large Fortunes. Pp.* 170. Price, $1.00. New York: American Economic Association, 1907.

Welsford, J. W. *The Strength of Nations.* Pp. 327. Price, $1.25. New York: Longmans, Green & Co., 1907.

"The Strength of Nations" is, as the author states on the title page, "an argument from history." The book is a plea for protection based on historical facts. Starting with Rome, the author traces the rise of industry and commerce in Constantinople, the Italian cities, the Hanseatic League, England, the Netherlands, Germany, Spain, France and the United States. All of these countries approach their ruin when their systems of production fail.

From his historic precedents the author draws the conclusion that production can be successful only under a protective system and therefore that a nation should adopt protective import duties. "For nearly five centuries, England strove to make herself strong, united, and independent of the foreigner, by protecting agriculture, in order that the home-grown food supply might be sufficient; manufactures, in order that there might be work for English workers; and shipping, in order to breed a race of seamen. The English system aimed at making England strong, united, and independent, and accomplished its aim."

It is disappointing to wade through the mass of historical data which the author has collected, and find at the end no series of definite conclusions. While he is successful in collecting his material, he fails to round it out into a definite system of ideas. The book is called a "plea" as contrasted with an "argument," because there is not even a connected thread of facts running through its pages. If it were an argument, it would at least be consecutive, and each chapter would add something in the reader's mind to the chapter that had gone before. As it is, after going through the book, one is merely impressed with the fact that it contains a great amount of historical data, all of which points toward the necessity for protection,—but arguments, there are none.

Although the book is not based on an argument, one thought runs through all of its pages. Whatever increases the wealth and industrial prosperity of a country should be practised regardless of its justice. Expediency comes before honesty or consistency. This is, to say the least, questionable ethics, and the general impression which the book leaves upon the mind is that the author, in his zeal for industry, forgets humanity.

West, M. *The Inheritance Tax.* Second edition. Pp. 249. Price, $2.00. New York: Columbia University Press, 1908.

Winter, N. O. *Mexico and her People of To-day.* Pp. 404. Price, $3.00. Boston: L. C. Page & Co., 1907.

An entertaining account, unfortunately full of repetitions and inaccuracies, is offered by one who has evidently traveled much in the republic and has a keen appreciation of the picturesque glimpses of the national life encountered. The descriptions of the ruins of ancient civilizations are especially interesting, but confidence is destroyed by numerous misstatements such as that making such a miserable port as Acapulco "The best harbor on the coast of North or South America."

Wood, W. A. *Modern Business Corporations.* Pp. xi, 358. Price, $2.50. Indianapolis: Bobbs-Merrill Co.

Every discussion of the principles and practices governing the organization and management of private corporations may be welcomed. Mr. Wood, of the Indianapolis bar, has published a concise work on "Modern Business Corporations," in which he has endeavored to consider the legal questions connected with the organization of companies, with their financial operations, with the keeping of accounts, and with the dissolution and reorganization of business concerns. One part of the book reproduces a large number of business forms, and there is an appendix containing useful charts and financial tables. In spite of the necessary condensation, the volume will prove serviceable to business men.

REVIEWS.

Baldwin, James Mark. *Social and Ethical Interpretations in Mental Development.* Fourth edition. Pp. xxvi, 606. Price, $2.60. New York: The Macmillan Co.

It is safe to say, I think, that few persons would read this book for relaxation merely. It is not surpassingly difficult, perhaps, for a psychological treatise; but the whole thing hangs together in such a way that one must give it his best attention to appreciate the argument fully. One who will do this will be exceedingly well repaid for his effort. No one concerned with problems of development, either general or special, could be considered as abreast of the times if he had not made a careful study of this book.

What it attempts to do is to examine in detail the relations that exist between the development of the person as an individual, on the one side, and society as an organic unity on the other side. Employing the genetic method, the author seeks to show that the individual and the society of which he is a member are but aspects or perhaps poles of a unity.

The individual is the heir of all the ages of social experimentation and achievement, and this constitutes his "social heredity," of which he possesses himself by imitation. The individual is an imitative person, but he is also an inventive person. In the very process of imitation novel results are accidentally achieved, and if these have social worth they are "selected." The genius is a person who varies markedly from the general social trend, and in the direction of social approval. The individual is always a particularizing force, particularizing on social heredity; and society is the generalizing force, making universal and permanent the valuable particularizations of the individual. When any particularization is thus generalized, social development is the outcome. Society as an organism would not progress if the individual was not a particularizing agent upon his social heredity; nor would progress be attained unless the inventions of the individual were generalized by the group of which he is a member. Social progress is thus the outcome of give-and-take relations between the individual and the group.

The particularizations of any individual are an outgrowth of earlier particularizations. Social progress is always in an ethical direction, for society cannot generalize unethical particularizations of the individual. However, this does not mean that there is always ethical harmony between the individual and society. At times the individual may particularize in ways opposed by society, when either the individual must abandon his position, or society must accept his particularization. The book has already exerted a marked influence upon contemporary developmental psychology, not only at home, but abroad as well.

M. V. O'Shea.

University of Wisconsin.

Beer, G. L. *British Colonial Policy.* 1754-1765. Pp. 327. Price, $2.00. New York: Macmillan Company, 1907.

Students of American history and of the relations of Great Britain to her American colonies have again been placed under obligations to Dr. G. L. Beer. The monograph by him published several years ago on the "Policy of Great Britain towards the American Colonies" was a model of thoroughness, exactness and conciseness. The present work covering the British colonial policy from 1754 to 1765 deals intensively with a brief period. These dozen years, however, were the most determinative of all in the relation of Great Britain to her colonies, and the investigations of Dr. Beer throw much additional light upon that period—an epoch-making one in the history of Great Britain and of the American colonies.

Beginning with the study of the theory of imperial defense prior to 1754, the author proceeds to the discussion of the Albany plan of union, then takes up the proposals for the taxation of the colonies from 1754 to 1756, after which he points out the failure of the requisition system, to which resort was had during the French and Indian War. The most instructive part of the book is contained in the chapters devoted to the regulation of trade during the Seven Years' War, and to a survey of the trade of the colonies with the enemies of Great Britain during that period. Great Britain had a serious grievance against her colonies for their disregard of the mother country in trading extensively with France and the French colonies.

Dr. Beer explains why Great Britain placed such a relatively high value upon tropical colonies as compared with those on the Continent; discusses the terms of the Peace of Paris, and the relation of that treaty to the imperial interests; details the attempted readjustment of the laws of trade following the Peace of Paris, and considers the reforms attempted in the administration of those laws. The last chapters of the book deal with the question of Indian policy and colonial defense, the revenue acts of 1764-65, and the opposition of the colonies to those acts of legislation.

The volume is based mainly upon a careful study of the British state papers in the Public Record Office in London. Contemporaneous pamphlet literature has been examined and the British statutes have been scrutinized. The author's point of view throughout has been the history of British policy rather than a history of the causes of the American Revolution,—as Dr. Beer states: "On its positive side the book is a portrayal of British policy, a study in imperial history; on its negative side it is an account of the preliminaries of the American Revolution."

The book is very carefully written, but the style is not so entertaining as one might desire. In order to make the volume of value to the investigator as well as of interest to the lay reader, the author has made footnote references to authorities from which every important statement is taken. He has also put a large amount of supplementary material into the footnotes. This method of presentation has the merit of making the book rich in information, but it imposes a serious handicap upon literary style. On the whole, it seems better to make the narrative in the main body of the book as con-

tinuous and as interesting as possible, and to put the supplementary material and notes in an appendix at the end of the volume. A minor number of footnote references to authorities is not distracting, but to have a considerable portion of nearly every page devoted to notes unnecessarily increases the readers' difficulties.

EMORY R. JOHNSON.

University of Pennsylvania.

Berglund, A. *The United States Steel Corporation.* Pp. 178. Price, $1.50. New York: Columbia University Press, 1907.

This volume, published as one of the Columbia University series in history, economics and public law, outlines the conditions which gave rise to the steel corporation, the character of the combination, and its effects on industrial conditions. From the economic standpoint, of course, the chief interest centers about the first and third phases—the causative influences and the results of monopoly.

The determining factors which have brought about or favored consolidation are natural conditions, analysed as follows: (1) The geographical location of the greatest ore deposits and highest grade ores just where cheap water transportation facilitates their movement to the centers possessing the best coking coal; (2) The need for large capital in economical production, as indicated by the fact that the principal economies attained by an iron and steel concern require an investment approaching $50,000,000; (3) The varying demand for commodities, during periods of prosperity and depression, is a powerful incentive to combination for the purpose of control; (4) The protective tariff, the "mother of trusts," as shown by the rise of the tin and terne plate industry after the passage of the McKinley Bill.

After a careful analysis and discussion of the character of the steel corporation, the author concludes that it is not a monopoly. At the present time it controls only the Lake Superior ore region, while the rival plants in Birmingham and Pueblo are able to compete successfully for half the annual product. It is evident, on the other hand, that pools, price agreements and trade understandings, have been affected between the steel corporation and other producers, as a result of which the price of steel has been maintained at a more nearly uniform level. The author apparently believes that further combination will take place, resulting in a practical monopoly, the success of which would depend greatly on a protective tariff. Mr. Berglund not only gives an excellent analysis of the world's greatest industrial combination, but also gives many interesting points concerning the present and future of American iron and steel.

WALTER SHELDON TOWER.

University of Pennsylvania.

Clark, John Bates. *Essentials of Economics.* Pp. xi, 566. Price, $2.00. New York: Macmillan Company, 1907.

Under this title, Professor Clark has partly fulfilled his promise made eight years ago in his "Distribution of Wealth," to write some day a volume

along dynamic lines, thereby complementing the static theories advanced in his earlier work. The material of the book naturally divides itself into two parts, though the author has made no formal division of subject matter. The first part treats primarily of theoretic laws, and the latter part of their practical application. In this second field the average reader is likely to find his greatest interest.

Throughout the entire book, Professor Clark constantly eulogizes competition as the great cure-all for our so-called modern industrial ills. He applies this principle consistently in dealing with all the practical problems whether it be the railroads, labor organizations, protective tariffs or the trusts. He says, "if nothing suppresses competition, progress will continue forever," and again, "monopoly checks progress in production and infuses into distribution an element of robbery." The author does not close his eyes to any of the evils of our modern industrial system. In no instance does he try to apologize for them or minimize their influence. He constantly warns us of the fate of a society which tolerates special privilege and monopoly power to the few. However, he is optimistic throughout, because of his belief in natural economic forces which, if allowed fair play, would cause these evils quickly to disappear.

The book is written in readable style, being much less drawn out than the author's earlier work, "The Distribution of Wealth." As Professor Clark states, it was written to be available for use in class room, not as a substitute for elementary text-books, but as supplementary to them. The subject matter of many of its chapters such as, "Organization of Labor," "Boycotts and Limiting of Products," "Protection and Monopoly," will cause this book to be of much greater interest to the general public than its predecessor ever could hope to be.

Frank D. Watson.

University of Pennsylvania.

Commons, John R. *Races and Immigrants in America.* Pp. xiii, 242. Price, $1.50. New York: The Macmillan Company, 1907.

Professor Commons covers an extremely wide field in this little volume, and parts of the discussion are not so detailed or complete as the reader might wish. In addition, the entire book impresses one as being rather a bundle of somewhat distinct articles than a well-planned series of related chapters. This fact, however, does not detract from the intrinsic value of each chapter.

The discussion of "Race and Democracy" teems with suggestiveness and opens to view a broad vista of present and future American problems. The questions arising in connection with the transformation of our social institutions are serious ones; for "in a democracy race and heredity are the more decisive because the very education and environment which fashion the oncoming generations are themselves controlled through universal suffrage by the races whom it is hoped to educate and elevate." In the chapter on "Colonial Race Elements," the author discredits the claims of

those who find the prime cause of America's initial greatness in its former race mixtures. Plainly, the problem is not so simple in its determination.

His extensive studies of the subject have enabled Professor Commons to compress into a comparatively small space a wonderful summary of the immigration of the nineteenth century, including the status, industrial value and character of the various contributing nationalities. He affirms that immigration has intensified our cycle of booms and depressions, because foreign labor is relatively cheap and wages fail to rise as rapidly as do the prices of commodities. This evil of immigration is further intensified by our opposite policy of a protective tariff for restriction on the importation of products.

This book is valuable not only for the cursory view of American race life, but also for the quantity of information which it contains. It is mainly descriptive, although some valuable generalizations are given. Its openness and lack of bias serve only to emphasize the gravity of these social problems. Consequently no easy method of attaining their solution is promised. The chief purpose of the book is to portray conditions and life as they express themselves.

George B. Mangold.

Washington, D. C.

Day, C. *A History of Commerce.* Pp. xli, 626. Price, $2.00. New York: Longmans, Green & Co., 1907.

This is the best single-volume treatise that has thus far appeared in English on the history of commerce. The subject matter of the history of the world's commerce during the past thousand years is so detailed and voluminous that it requires great literary skill and scientific judgment as to relative values in order to cover the subject satisfactorily in a single book. Professor Day has accomplished his task with results better than I had believed possible.

The discussion of ancient commerce is wisely abbreviated to four short chapters which are intended to serve rather as an introduction to the main body of the work. Medieval commerce from the year 1000 to 1500 is covered in one hundred pages in a summary but fairly satisfactory manner. To the history of modern commerce, viz.: The three centuries from 1500 to 1800, one hundred and forty pages are devoted. The period of the nineteenth century is discussed in more detail, one hundred and eighty-five pages being given to European countries, and one hundred and twenty pages to the United States.

The most satisfactory chapters of the book are those concerned with recent commerce and particularly with the history of the commerce of European countries during the nineteenth century. The material presented is well selected and the emphasis is well placed. The discussion of the history of the commerce of the United States from 1789 to the present is somewhat disappointing, partly because so much of the limited space available is taken up with commercial geography. It would probably have been

better for Professor Day to have assumed that the readers of his volume were acquainted with the commercial geography of the United States. His book is written primarily for college students who ought to study commercial geography before pursuing the history of commerce. It is to be regretted that the author did not confine his discussion of the commerce of the United States strictly to commercial questions.

From the bibliographical standpoint the book is a model. The paragraphs of the book are numbered, and at the end of the volume there is a bibliography citing authorities drawn upon in the writing of each paragraph. Those who desire to read the book through without referring to authorities may do so without the interruption and distraction of footnotes, while those who wish to study the subject more fully find at the close of the volume the references to be read in order to gain fuller knowledge of practically every topic touched upon. The lengthy bibliography also includes an alphabetical list of the standard books on commerce—a list which every well-organized library ought to contain.

Emory R. Johnson.

University of Pennsylvania.

Dowd, Jerome. *The Negro Races.* Vol. I. Pp. xxiii, 493. Price, $2.50. New York: The Macmillan Company, 1907.

In this volume the author treats of three groups: The Negritos (the Pygmies, Bushmen and Hottentots); The Negritians (the Jolops, Hansas, Ashantis *et al.*), Fallataps (Central Soudanese). The second volume will deal with Slavery and the Slave Trade in Africa and the Modern African Labor Problem. In the third volume East African negroes, the Bantus, and the American negroes will be described. Other volumes dealing with the Indians and other races are projected.

The justification for so extensive a series the author finds in the lack of definiteness in modern social theories and in the failure to properly emphasize the influence of the physical environment. "The author's first object, therefore, is to establish the fact that each race has its distinctive institutions and special evolution corresponding to the locality in which it lives or has lived. The second object is to discover the factors and laws which explain the mental and moral characteristics and particular institutions of each general racial division, to the end that the principles and laws discovered may be applied to whatever is abnormal or retrogressive." The study begins with the negro races as representing the lower stages of culture and also because of the presence of the negro in America.

"The environment first controls man, after which man controls the environment." Hence the Pygmies, Bushmen and Hottentots, dwelling in the most unfavorable areas in Africa, stand at the lowest point. The descriptions are rather unsatisfactory in this first part of the book, in large measure because of the meagreness of our knowledge respecting these peoples.

In the second part the results are better. The country inhabited by the Negritians and Fellataps is divided into four zones, from the Equator north—Banana, Millet, Cattle, Camel. The different characteristics of the peoples are well set forth, and the connection between the social developments and the country pretty clearly shown. The author has, perhaps, lost force by not completely describing each zone by itself, instead of skipping from one to another in each succeeding chapter. This method tends to give one not already familiar with conditions a confused idea of the situation. The physical features of each zone are described, followed by a discussion of the economic life, family life, political life, customs, ceremonies and the spectacular, religious life, æsthetic life, and psychological characteristics.

Mr. Dowd is generally consistent, but occasionally lapses into popular prejudices. He believes that too much emphasis is laid upon race mixtures as means of bettering conditions, yet he repeatedly suggests the same thing (pp. 201, 132). One great difficulty is that everyone who shares, as does the reviewer, the author's main conception, suffers from the vestiges of earlier beliefs which occasionally manifest themselves, but even more from dearth of material. It is worth while, however, to attempt at times to correlate all that can be gotten. Complete success is not to be expected. Mr. Dowd has given us the best description of the African negroes in brief compass yet produced. The book should be carefully read by all who have to deal with negroes in any way, or who are interested in social studies.

Carl Kelsey.

University of Pennsylvania.

Durland, Kellogg. *The Red Reign.* Pp. xxv, 533. Price, $2.00. New York: The Century Company, 1907.

This book will rank as one of the most important as well as most interesting of recent accounts of conditions in Russia. The author is a young man of wide experience, a careful and accurate observer, and possesses decided literary ability. For over a year he traveled about the country in various guises. He attended the sessions of the first Douma as a correspondent. He visited Boku and southern Russia as a Cossack officer (by courtesy of commanding officers), and was for a time boon companion with regular officers. With a brigand as guide and interpreter he explored some remote Cossack villages. He journeyed through the famine districts, and crossed the Urals into Siberia. In St. Petersburg he was brought into intimate contact with the Revolutionists.

Mr. Durland believes that the peasants are awake to the situation and that the old absolutism can never return. The government maintains itself by means of the Cossacks, an extraneous group, serving only for money, and by the great foreign loans. How long the struggle may last no one can predict. "There is a terrible menace, a grave danger, it seems to me, in this prolonged struggle. Where all standards of public and private morality are shaken, the characters of the individuals living under such a régime must

suffer." . . . . "I foresee a long, long struggle." Some fifty reproductions of photographs add interest to the text. By all means read this book, not merely for its accurate portrayal of conditions elsewhere, but as a stimulant for the bettering of civic conditions at home.

CARL KELSEY.

University of Pennsylvania.

Eaton, John. *Grant, Lincoln, and the Freedmen.* Pp. xxxviii, 331. New York: Longmans, Green & Co., 1907.

The title of General Eaton's book correctly describes its contents. It treats of three more or less unrelated subjects. Eaton was a stanch admirer of General Grant, believing him to be a model of civic and military wisdom, and in this book numerous incidents are related which support this conviction of the author. Of Lincoln there is nothing new unless it be the recital of some rather remarkable confidences which Eaton says Lincoln made to him in regard to his mastership over Seward, etc. The author's memory probably played him tricks, for he has related rather too large a proportion of the well-known Lincoln anecdotes as having been first told to him. The most valuable part of the book is a summary of Eaton's work among the blacks of the Mississippi Valley during the war. This account is condensed from his report of 1864 supplemented by explanations and reminiscences. The difference between the policy of Eaton and that of the Treasury Department is clearly stated, and the author is certainly justified in the criticisms he makes of the Treasury plan which paralyzed his own work and resulted in such suffering among the blacks. But he is not correct in so magnifying the results of his own work. As a matter of fact his plans really fell to the ground in 1864 because of the inauguration of the lessee system by the Treasury Department. Had he succeeded in his work there would have been at the proper time and on correct lines a real Freedman's bureau quite different from the institution which was organized after thousands of negroes had perished. Notwithstanding his practical acquaintance with conditions among the blacks after 1862, Eaton was always profoundly ignorant of the actual conditions of slavery. For example, as a proof of negro capacity developed by a year of freedom, he refers to a self-governing community, established during the war, at Davis's Bend, on the lands of Jefferson and Joseph Davis. In fact, the Davises had for forty years been training their negroes to govern themselves by means of black courts, black sheriffs, etc. A similar instance of superficial knowledge of conditions in the South is shown by his statement that the Peabody fund "served to put the system of universal education in the South upon its feet." Of such minor instances of insufficient information there are numerous other evidences, but after all the part of the book about Eaton's own plans and experiences is valuable and all of it is interesting.

WALTER L. FLEMING.

Louisiana State University.

Edwards, Alba M. *The Labor Legislation of Connecticut.* Pp. viii, 322. Price, $1.00. New York: The Macmillan Co., 1907.

The publication of this monograph by the American Economic Association marks the passing of another milestone in the efforts the Carnegie Institution is furthering to collect material for an economic history of the United States

The purpose of the author—"to discuss the labor legislation of Connecticut historically and critically, and . . . to trace the economic effects of the different laws"—has been admirably carried out. In scope the work covers factory legislation (including child labor), the employment contract, employers' liability, boycotting and blacklisting, free public employment bureaus, mediation and arbitration, the union label, the barbers' license law, and convict labor, with a separate chapter on the State Bureau of Labor Statistics. This bureau, though charged with an occasional wrong attitude on labor questions and with an inefficiency due to lack of sufficient legal powers, is credited with more or less accurate investigations and with aiding in the passage of important legislation. The State Board of Mediation and Arbitration is regarded as a failure, "due largely to a lack of confidence in the board."

Dr. Edwards frankly confesses that the greater part of the statistics he has been able to gather are incomplete and inaccurate:—which, it may be observed, is equally the case in other American Commonwealths. Connecticut is among the backward states in the failure to prohibit the employment of women and young persons at night or in dangerous occupations. But Connecticut is unique in the close and natural relation established between the child labor and the compulsory education laws, the enforcement of both of which is properly placed in the hands of the State Bureau of Education. Organized labor, while not always pursuing "a broad-minded policy," has been "the chief factor in securing labor legislation" since 1885. Employers have usually exhibited a commendable willingness to comply with the law, though they have not hesitated to defeat some excellent measures or to weaken them before they became law. Dr. Edwards is to be congratulated on having made a valuable contribution to the literature of social legislation, in a field in which the harvest is ripe and the laborers all too few.

J. Lynn Barnard.

Philadelphia School of Pedagogy.

Fessenden, Francis. *Life and Public Services of William Pitt Fessenden.* Two vols. Pp. xiv, 741. Price, $5.00. Boston: Houghton, Mifflin & Co., 1907.

William Pitt Fessenden was a great senator and deserved a proper biography, but it cannot be said that the volumes by his son fulfil the need. Some day the work must be done over again. In the preface the editor states that the work was begun years ago by General Francis Fessenden, who spent ten years in gathering material. When he wrote out the life it was too long and had to be abridged. Perhaps this fact accounts for some of the defects in the work, for the spirit was condensed out of it. The two volumes

are devoted mainly to an account of Fessenden's service in the Senate from 1854 to 1868, with very slight reference to what went on outside the Senate, whether in Fessenden's life or in the country generally. The author shows slight acquaintance with the historical literature of his period, although he sometimes attempts to give a general history of certain periods or questions. Even in dealing with Senator Fessenden, too much reliance is placed upon public speeches and debates. There is entirely too much undigested material from the "Congressional Globe" in the work—about 150 pages of lengthy quotations besides shorter ones and summaries of debates. The Report of the Joint Committee on Reconstruction is reprinted, as well as several senatorial opinions on the impeachment trial. Such matter is elsewhere accessible to most people who will read a life of Fessenden. In discussing financial matters little is done to show exactly what Fessenden did, why he did it, and why he was regarded as a master of public finance. The historical part of the work appears to be drawn directly out of the speeches of the time. Naturally men's views were then narrow and often superficial, and their language bitter, but that is no excuse for similar views or language fifty years later.

But the Life does add something to the sum of human knowledge. The author gives us a few new points about the impeachment trial and other important events, and his rigorous exclusion of nearly all that would tend to prove Fessenden a human being did not prevent the printing of some very interesting letters. How one wishes for more of them after reading forty pages of the "Globe"! Fessenden could make a letter readable. Take a few extracts from them: in regard to Tyler he said, "I wish the devil had him at the end of a pitchfork . . . . a poor animal who was never worth the snuff of a candle, or a cheese-paring, or a quid of tobacco;" of Mrs. Madison he said that she "is as upright as a pillar of salt and in about as good preservation;" of the President who was acquitted by his vote he wrote "Andy is a fool."

W. L. Fleming.

Louisiana State University.

Fisk, G. M. *International and Commercial Policies.* Pp. xv, 288. Price, $1.25. New York: Macmillan Company, 1907.

Dr. Fisk has given to teachers of commerce a book of great value for elementary work. The volume is primarily a text book, containing simple direct statements of facts rather than a discussion of policies. Starting with a general discussion of the meaning of commerce, especially in ancient and middle ages, the author proceeds to the development of modern commercial policies, discussing at length the Mercantile System, Free Trade and Protection. He next discusses the broad subject of Customs, dealing with its several topics, such as import and export duties, tariff and tariff systems and the technique of customs, such as *ad valorem,* specific and differential duties. Another section of the book is devoted to discussing commercial treaties, their nature, form and contents and the subject of reciprocity.

Dr. Fisk then devotes three chapters to the important subject of trade-promoting institutions both public and private. Under this heading, he discusses our consular service, our Department of Commerce and Labor, with its various bureaus, and such quasi-public institutions as the Philadelphia Commercial Museum. Other suggestive chapters treat of commercial statistics, navigation, politics and public institutions for the promotion of navigation. The work is valuable for its clear English, its direct statements and its rounded treatment of a broad subject within the compass of a text-book of less than three hundred pages, including the excellent bibliographies appended to each chapter.

FRANK D. WATSON.

University of Pennsylvania.

Hadley, Arthur. *Standards of Public Morality.* Pp. 158. Price, $1.00. New York: Macmillan Company, 1907.

In this work, as in all his public utterances, President Hadley is eminently safe and sane. He has no patent medicine cure-all for the economic and political ills which retard the industrial and commercial progress of the country and threaten the permanency of democratic government. There is, he finds, a striking difference between the standards of public and private morality. In industrial and political life men are lauded and honored for doing the very things that are absolutely discredited in private life. Under these circumstances the usual process is to look to legislation for relief. The legislature is, however, under our system of government, a representation of special interests or of geographical sections each with its own wants. Thus legislation too often becomes a struggle for selfish ends rather than the intelligent consideration of measures for the common good. Democracy may thus become the instrumentality by which the majority tyrannizes over the minority, while constitutional government, on the other hand, may be used to support and protect the selfish interests of a class. The permanent interests of all classes are, however, much more nearly identical than their temporary ones, and an intelligent public opinion, appreciating this fact, will gradually establish and enforce standards of public morality that protect the weak from oppression and prevent the strong from abusing their power.

MAURICE H. ROBINSON.

University of Illinois.

Hunt, Wm., and Poole, R. L. (Editors). *The Political History of England,* in twelve volumes. Vol. V. From the Accession of Henry VII to the death of Henry VIII, 1485-1547. By H. A. L. Fisher. Pp. xx, 518. Price, $2.60. New York: Longmans, Green & Co.

The general character of this series has been so fully commented on in earlier review articles in THE ANNALS, that it remains for the present review only to analyze and discuss this important and interesting volume, the

fifth. The author has a well-defined and distinctive field. The sixty-two years extending from the accession of Henry VII to the death of Henry VIII, from 1485 to 1547, saw the firm establishment of the "strong monarchy" of the Tudors, the adoption of the Reformation, so far as that movement consisted in the subordination of the ecclesiastical to the civil government, and the distinct separation of the English Church from the Church of Rome, the initiation of a great intellectual movement at the English universities, and much of the social revolution on the rural manors and in the artisan towns. The period is one in which the main lines of development are relatively clear. Differing views on the nature of the Reformation, the motives of its leaders and the degree of participation of the people, will of course always be taken, but its main course is not obscure. The foreign negotiations are less tortuous and more consistent than those of either the preceding or succeeding periods. Again, the materials for a study of the period are almost all printed or fully calendared, and to an Englishman at least, readily accessible. The appendix on "Authorities" is a remarkable bibliographical showing. Of no later period are the sources so fully published.

Mr. Fisher is, therefore, to be congratulated on the field that is given him to till by the editors of this series. And he has done the work well. He is familiar with both the primary and the secondary writing on the subjects he has to discuss. He has evidently dwelt on it until the whole history has taken a consistent shape as a unified whole in his mind. His narrative has a continuity and vigor from the beginning to the end that is seldom seen in modern scientific historical work. A certain gift of epigram or quaint characterization often relieves the more serious chapters and gives piquancy to what is already seriously valuable.

The author's panegyric upon Henry VIII would probably not have satisfied that monarch so well as it will most thoughtful students of his career. "Henry at least understood his own age. Gross, cruel, crafty, hypocritical, avaricious, he was, nevertheless, a great ruler of men. His grasp of affairs was firm and comprehensive; his devotion to public duty was, at least after Wolsey's fall, constant and sustained by a high and kingly sense of his own virtues and responsibilities. Before the judgment seat of his watchful, exacting, and imperious conscience, he at least was never found wanting. Despite violent oscillations of mood he saw the larger objects of policy with a certain steadfast intensity, the preservation of the dynasty, the unity of the state, the subjection of Scotland." But Henry always shows off to better advantage when he is generalized upon than when he is treated in detail. As in the case of several other sovereigns, the wonder is that so much that was petty, selfish, personal and narrow-minded should combine into a whole of which so good an estimate can be given.

The relatively narrow restriction of this series of volumes to the political element in history seems to have bound the author of this volume less closely than some of his predecessors. There is, for instance, a full discussion of the commercial policy of Henry VII, an admirable chapter on the "Dawn of the English Renaissance," and a thoughtful paragraph on the

disposition of the monastery lands. In fact, some matter concerning this last point is the most distinctly original contribution of the book toward our knowledge of the Reformation period. Largely as an inference from the studies of Alexander Savine, a Russian student at work in England, whose results are summarized in an appendix to this volume, it has been found that the confiscated monastery lands were less completely squandered than has been generally supposed.

Altogether it may be said that in this volume we have an adequate, impartial, and highly readable account of the period it covers. Our chief criticism of the work is rather negative than positive. We miss a deep perception of causes and effects, insight into a larger significance than appears on the surface, recognition of the part the unnamed populace played, as well as the named chief actors, a knowledge on the part of the writer, and a clarification for the sake of the reader, of the larger institutions of the time. But such a study of the history of the time was evidently not in the mind of the author, and we may well acknowledge the excellence and value of the history he has given us as he conceived it.

Edward P. Cheyney.

University of Pennsylvania.

Latané, J. H. *America as a World Power.* Pp. xvi, 350. Price, $2.00. New York: Harper Brothers, 1907.

The extent to which political activities in the United States have become world activities is hardly to be appreciated until their history is brought together in such a volume as this. Starting with Cuban intervention and ending with the second Hague Conference, the author presents a brilliant summary of the last decade of our foreign policy.

The task before an historian who undertakes to discuss events almost contemporary is a difficult one. The voluminous character of the material, the numerous branches of national policy, and the difficulty of putting the different factors in their proper perspective call for an ability for synthesis possessed by but few. Professor Latané has carried out the work with skill. That some of the pages savor of the magazine and that occasional overlappings occur is to be expected and is perhaps unavoidable.

The first third of the book deals with the Spanish War and its immediate results. Especially well done are the discussions of the peace negotiations, the vacillation of the administration as to the policy to be followed in the Philippines and the relations with the insurgents previous to the conclusion of the treaty. The second third takes up the consequences of the war as shown in our relations with Cuba, the constitutional questions raised by the dependencies and our new position in the Orient. The last third takes as its chief subjects the international questions involved in the Alaskan boundary dispute, the Panama Canal, the Hague Conference and the present status of the Monroe Doctrine. The latter factor, "the cardinal principle of American foreign policy," runs at the back of almost all of the discussions. The author maintains that the United States is guilty of no

inconstancy to the Monroe Doctrine in its extra-American actions. As originally enunciated, the Doctrine was intended to contrast European and American conditions, therefore the entry into Asian politics is a departure into a region not originally considered, and hence one from which we did not, even by implication, exclude ourselves. "The coast of Asia has a set of primary interests of its own." Our actions in European affairs are still accompanied by a determination not to interfere with the internal policies of the nations of that continent. Nevertheless, the author holds the Spanish War was decidedly "a parting of the ways," an event the importance of which not only in international affairs but in our own constitutional history, we can yet but dimly estimate.

The chapters on foreign policy are supplemented by brief discussions of the elections of 1900 and 1904, and of present economic tendencies. A short concluding chapter presents the chief sources of material.

Chester Lloyd Jones.

University of Pennsylvania.

Lindsay, Thomas M. *A History of the Reformation.* Two volumes. Pp. xxxiii, 1159. Price, $2.50. New York: Chas. Scribner's Sons, 1907.

Dr. Lindsay has in these two volumes given us the best history of the Reformation to be found in English. The product of many years of study, it is written with a grasp of the subject, a vigor of movement, and a clearness of style that is not often found in such works. In fact, it is unusually readable. There is much generalization, but it is made with a virility that holds the attention, while there is everywhere the personal interest whether it be of portraiture or in dramatic portrayal of events. The sketches of "Bloody Mary" (II, 333), of von Hutton (I, 78), and of Erasmus (I, 177), of Charles V and Luther at the Diet of Worms, and of Charles V and the protesting princes at the Diet of Worms are not easily forgotten.

Without giving the space to environment that Ranke, Jannsson and Bezold have, the first 188 pages are devoted to the setting of the movement. The papacy, with its temporal and spiritual claims, is first considered, and then the political situation. Here stress is laid upon the fact that "During the period of the Reformation a small portion of the world belonged to Christendom, and of that only a part was affected either really or nominally by the movement. The Christians belonging to the Greek Church were entirely outside its influence. . . . . It was not until the heroic defence of Vienna, in 1529, that the victorious advance of the Moslems was stayed." The chapter on social conditions is especially valuable for the concrete picture of the fifteenth and early sixteenth century German town on the one hand and of the daily life of the peasant on the other, as well as the great discontent and restlessness resulting from class distinctions. The chapters on the Renaissance and Humanism emphasize that "What was once confined to a favored few became common property." "The coming revolution in religion was already proclaiming that all human life, even the most commonplace, could be sacred; and contemporary art discovered the picturesque

in the ordinary life of the people—in the castles of the nobles, in the markets of the cities, and in the villages of the peasants." It is, however, in the "Family and Popular Religious Life in the Decades before the Reformation" that Dr. Lindsay finds the keynote of his two volumes. "The great Reformation had its roots in the simple evangelical piety which had never entirely disappeared in the medieval Church."

Greater emphasis is laid upon the life and work of Luther than on that of the other reformers, though William of Orange, Calvin, the Huguenots, and even Cranmer are most sympathetically treated. Indeed, whether one agrees with it or not a better plea has rarely been made for the value of the individual in history than this by Dr. Lindsay. "History knows nothing of revivals of moral living apart from some new religious impulse. The motive power needed has always come through leaders who have had communion with the unseen. . . . The times needed a prophet . . . . one who had himself lived that popular religious life with all the thoroughness of a strong, earnest nature . . . . who knew, by his own personal experience, that the living God was accessible to every Christian. . . . He became a leader of men because his joyous faith made him a hero by delivering him from all fear of Church or Clergy. . . . Men could see what faith was when they looked at Luther."

Wm. E. Lingelbach.

University of Pennsylvania.

Meyer, H. R. *Public Ownership and the Telephone in Great Britain.* Pp. 386. Price, $1.50. New York: The Macmillan Company, 1907.

This book, against public ownership like its predecessors by the same author, contains a considerable quantity of useful information, backed up in the footnotes by exact references to official and parliamentary reports, but it will produce on most readers the impression of being too one-sided to be considered a final treatment of the subject.

Likewise, in the study of the half dozen municipal telephone systems, which were in most cases bought out by the postoffice or the National Telephone Company in 1906, scarcely a reference is made to the rates in force by the private company in those cities prior to the beginning of municipal competition. In reading between the lines, however, it would appear that the municipalities gave an unlimited rate for exclusive service at about half the rates that the companies had been charging, and that when face to face with such competition, the National Telephone Company introduced new and very low rates for measured service. The resulting social and business advantages to the people from these low rates are ignored by our author, who seems to think the whole question is settled by the willingness of the cities ultimately to sell to the postoffice or the company, and by the fact that in the sale three or four of the half dozen cities did not recover quite all of their investment, including their original heavy parliamentary expenses.

With regard even to these last two points it should be asserted that most of the cities following the lead of Glasgow did not wish to sell out,

but found that the government insisted on buying the plants at their replacement value in 1911, and this change of policy in 1905 was far more responsible for the sale of the municipal plants than is brought out by Professor Meyer.

Having said this in criticism of the book, it should be added that certain drawbacks upon telephone development in Great Britain through widely different policies of the government at different times and the evident weaknesses of some of those policies are clearly brought out. In many parts of the volume the author sharply criticizes Glasgow and the other cities undertaking the telephone business because they made prominent an unlimited service instead of a measured service, yet in other parts of the volume Professor Meyer has referred to the American telephone service as in every way ahead of the British. It is interesting to note that the traffic department of one of the large branches of the Bell Telephone Company, namely, the Cleveland Telephone Company, informs the writer that 90 per cent of their 32,000 subscribers in the Cleveland district are using unlimited service. This is substantially true of the rival independent company. All over the United States the Bell companies, after some experiments with the measure service, are now abandoning it. This is certainly an interesting commentary on Professor Meyer's treatment of the subject.

This book, like the others which Professor Meyer has written, will prove of great help to those who wish to marshall on one side all that can be said against public management, and any fair-minded student of the question will of course desire to understand that side and will thank our author for presenting it so clearly. At the same time room is left for a more rounded and judicial treatment of the subject.

Edward W. Bemis.

Cleveland, O.

More, Louise Bolard. *Wage-Earners' Budgets.* Pp. x, 280. Price, $2.50. New York: Henry Holt & Co., 1907.

A more accurate, intense and sympathetic statistical study of the standard and cost of living of wage-earners has never been made, either in this country or in Europe. The incomes and the cost of living of two hundred families of wage-earners are here given, and in the most critical and sympathetic fashion. While this work is by no means so extensive as that of Le Play, Engel, Booth, Rowntree, or of the United States Department of Labor, it is the result of more personal and intimate knowledge of the subjects investigated, and it embodies more of the real life and ideals of the wage-earners than that of any other investigator in the same or similar fields. Mrs. More gives us, in this volume, the product of her research for a period of practically two years in that section of lower west New York City known as the Greenwich House neighborhood. Her research was of the co-operative nature, for she made investigations into the standards of living and the cost of living of those families who would intelligently aid her. Mrs. More's book is all the more valuable, since it is the result of an intimate,

intense intelligent, and non-partisan investigation. The chief value of the book is the collection and tabulation of facts, though its conclusions and comparisons are in almost every instance accurate and reliable. Nowhere do we find hasty and ill-judged generalizations.

She gives us an exhaustive analysis of each of the two hundred families according to occupation, nativity, size, income from various sources, and expenditures for various outlays. In all these aspects she has a double aim: to collect and publish the facts; to discover the attitude of the wife and mother, the real manager and dispenser of the family income, "toward what is a necessity and what is a luxury, what is desirable and what is to be endured," since this clearly reflects the real standard of living of the family. In doing this Mrs. More has been at work along the border-line of the moral and the economic and social. In the future we shall, I am convinced, work much more earnestly along this border line.

Some of the conclusions of this intimate and intense investigation are: (a) That there is a constant interdependence between the size of the family and its income, and also the resulting surplus or deficit; (b) that as income increases the percentage expended for food, rent, light and fuel tends to decrease, but for clothing and sundries to increase; (c) that the chief causes of dependency are: (1) Large family with small income; (2) the illness or death of the principal wage-earner of the family; (3) the irregularity of work whether due to drink, incapacity, or industrial conditions.

As to the literary style of the book, we are at times impressed by the lack of vigor and enthusiasm, to say nothing of a lack of polish.

CHARLES LEE RAPER.

University of North Carolina.

Murray, A. M. *Imperial Outposts.* Pp. xxiv, 210. Price, $3.50. New York: E. P. Dutton & Co., 1907.

This is a carefully written record of observations made during a trip round the world on which the writer visited the ports chiefly involved in the problem of imperial defense. It is more than a book of travel, in that the writer shows on every page the technical training of the army man and a thorough knowledge of present-day international relations. Nor does the national bias appear, though the subject is one where we would naturally expect it to be found. Criticism is meted out where needed, especially to the management of the colonies of Aden and Singapore, and to the unsatisfactory status of the foreign community in Shanghai. The theme of the book is to demonstrate the necessity of protecting British trade routes by the maintenance of a navy that shall truly "rule the seas." In connection with this idea the Japanese Alliance in its relation to British fighting power is discussed at length. The standard of a navy greater than "any possible two-power hostile combination" is accepted as essential. The present distribution of the English navy and the improvement in coaling and refitting stations present a good idea of the care with which England is guarding even the farthest branches of her commerce.

The swift changes in progress on the diplomatic chessboard of the near and far East have made many of the statements true six months ago already out of date. The discussion of Anglo-Russian relations both in Afghanistan and Persia no longer fits the case as is also true of a portion of the discussion on the status of Mesopotamian politics. The more permanent features, however, dealing with the strategic advantages and dangers of the Island Empire are well discussed and in a way that can be appreciated by the average man. Though written from a military viewpoint the book is readable from first to last. The author adopts the plan of stating facts rather than presenting argument, a method which proves thoroughly convincing to the reader.

CHESTER LLOYD JONES.

University of Pennsylvania.

Ortuzar, Adolfo. *Chile of To-day.* Pp. 508. Price, $5.00. New York: The Tribune Association, 1907.

In this work, which is compiled annually by the Consul-General of Chile in New York, an attempt is made to present in succinct form the progress of the Republic of Chile during the year. The author has collected a mass of valuable information which will be of great service to everyone interested in the South American affairs. The description of the progress in agriculture, industry and commerce, and particularly the remarkable strides made in the nitrate industry, will be a revelation to those who have not given special attention to Latin-American affairs. Another significant fact which is brought out by Mr. Ortuzar's description of the governmental system is that while there are sudden changes in the Chilean cabinet owing to the attempt to work a parliamentary system of government, the fundamental basis of the Chilean political system is firmly established. Although cabinets may change, in fact do change so rapidly that six months is deemed a long life for any one ministry, these changes do not affect the security of person and property. It would be most valuable if we could have such a series of year-books for every one of the South American countries.

The only suggestion to be made is that annuals such as these should be written in a more critical spirit. In reading Mr. Ortuzar's book one has the feeling that the idea of propaganda occupies too large a place in the preparation of the work. This tone is certain to arouse the feeling that it is intended as evidence in proof of Chile's importance. Because of this fact it is not likely to carry the same weight that it would have if the tone of the work were somewhat more judicial.

L. S. ROWE.

University of Pennsylvania.

Shaw, Albert. *Political Problems of American Development.* Pp. vii, 268. Price, $1.50. New York: Columbia University Press, 1907.

This work is indispensable to every student of American political institutions. The author has not devoted himself to a study of the structure of government, but rather to its actual operation and to an analysis of the forces that have determined our national policy. There are few men in the country who could undertake such a work and carry it to successful conclusion. In every chapter the author shows not only his broad grasp of the subject, but also his ability to interpret the thought of the American people on great national problems. His success in this respect is not surprising to those who have followed the excellent summary of current events which appears each month in the "Review of Reviews." This volume will be of equal value to the university student and to the great body of citizens who are seeking light and guidance in national affairs. The author holds no brief, and his book is not an argument for any partisan policy. It is a clear judgment of a keen observer and careful student of American affairs. This book will rank with Henry Jones Ford's "The Rise and Growth of American Politics," as a study of the facts of American political development.

L. S. Rowe.

University of Pennsylvania.

Sumner, W. G. *Folkways.* Pp. v, 692. Price, $3.00. Boston: Ginn & Co., 1907.

A generation ago, Professor Sumner was one of the ablest advocates of free trade in this country. The same clear thinking and power of expression which marked him then are revealed in this volume. The present work is an excursion made necessary by the larger study of society on which he has been working for many years. The range of the author's reading is indicated by the fact that sixteen pages are needed for the index of works cited.

"The folkways are habits of the individual and customs of the society which arise from efforts to satisfy needs." They win traditional authority. "Then they become regulative for succeeding generations and take on the character of a social force." They arise unconsciously and "are not creations of human purpose and wit." They may be founded on mistaken inferences; they may even be harmful. By discussion and comparison they are harmonised as philosophy develops recognition for principles. Folkways are of supreme importance. "The life of society consists in making folkways and applying them." The mores "are the ways of doing things which are current in a society to satisfy human needs and desires, together with the faiths, notions, codes, and standards of well living, which inhere in those ways." Thus arise conventions which, though often denounced, are necessary. The mores are rigid and inert and change with difficulty. A society is usually unconscious of its own mores till it comes in contact with different peoples. The mores are seldom altered by direct application of intelligence.

The general theory being posited in the first two chapters, the author thenceforth makes more scientific application of it. In the balance of the book such topics as The Struggle for Existence, Labor, Slavery, Cannibalism, The Marriage Institution, Incest, Asceticism, Education, are treated *in extenso* with a wealth of illustration.

By many Professor Sumner's views would be considered radical in the extreme. There are no final standards. "The mores can make anything right and prevent condemnation of anything." Yet, no one can take exception to the spirit and method of the author no matter how much he may dissent from his philosophy. The author is seeking to establish the facts. Nevertheless, the criticism of many existing conceptions and institutions is keen and cutting. The book is decidedly thought-provoking. The discussion will not fail to make an impression. Personally, I have found the book of great value. Professor Sumner is not so much seeking to establish a theory as to explain certain human institutions. Because of the frank and honest character of the study it is to be highly commended particularly for advanced students of sociology.

Carl Kelsey.

University of Pennsylvania.

Trevelyan, Sir George O. *The American Revolution.* Part III. Pp. xii, 492. Price, $2.50. New York: Longmans, Green & Co., 1907.

From the time when Burke wrote its contemporary record in the "Annual Register," the English Whigs have given us the most readable histories of the American Revolution, and this, the latest contribution from that prolific source, fully maintains the standard of literary excellence. For an English writer to favor the American side does not necessarily mean an unbiased mind. The English party conflicts of that date were bitter and have been inherited as family feuds, while the present interest which all Englishmen feel in the problems of colonial government renders their discussion of many phases of Revolutionary history less detached than that of American students. Mr. Trevelyan has his full share of prejudices. He hates the Tories, both English and Americans; he has little use for the French, and belittles Vergennes by exalting Beaumarchias; he can see no good in any opponent of Washington, and no fault in his supporters. He is devoted to the Whigs, to Washington, Morris and Franklin, and to the Quakers. In fact, scarcely an individual crosses the page without receiving the stamp of the author's judgment. These judgments are founded on an acquaintance with the literature and correspondence of the period probably more extensive than that of any previous writer on the subject, and the result is a narrative as vivid as a source and with a breadth of information and of views impossible to a contemporary writer.

This substantial volume covers a period of eighteen months, but this is not the result of an uncritical inclusion of unimportant matters, but of the detailed study of the really important events of the period. The significant military operations are given with an excellent comprehension of their

important features, and with an admirable description of the background of physiographical conditions and of the state of public opinion. Particularly good is the impression of the control of the country by the patriotic forces and the futile assistance of Loyalists to the British, in view of the exaggeration of the importance of the latter element in recent American studies; though in that, perhaps, an opposite extreme is reached. No book brings out so clearly, moreover, the services of General Washington during this period. The discussion of diplomacy emphasizes the influence of Frederick the Great, and perhaps unduly discredits the earliest American efforts. It is rather a stimulating sketch than a study. The author's acquaintance with legislative materials is far less satisfactory than his grasp of more personal matter, and the internal history of the Union and the states receives little attention. The book is scholarly and free from vulgar errors of fact, and will have a permanent place in the literature of the subject both for the scholar and the more general reader.

Carl Russell Fish.

University of Wisconsin.

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